Economy versus Climate - The construction of polar opposites?

A qualitative investigation of extreme viewpoints

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Abstract

Media and research alike have made polarization a key concern. Indeed, signs of polarization can be observed in increased numbers of protests, voting behavior and social media. However, research suggests that attitudes themselves have not become more radical over the years. What then brings about this polarized expression of extreme opinions? The aim of the present study is to provide an in-depth look into the motives of people who express themselves extremely. We did this by conducting qualitative interviews with participants (*N*=6) who previously expressed themselves extremely on an attitude survey about climate policy and the economy. We found that the main reasons people stated for being active in this manner online were to (a) influence others by providing information (b) expressing their emotions and support for others and (c) informing themselves. Further, common themes we identified were (a) a strong sense of urgency (b) negative views of the government (c) outgroup prejudice towards farmers and (d) assumptions about other people. Our results are partly in-line with prior research about social media usage, but also offer new insights for possible research avenues, such as the meaning of urgency in social media action or the translation of moral exporting, belief superiority and social vigilantism to a social media context.

Keywords: Polarization, Extreme Attitudes, Social Media, Environmental Activism, Climate Policy, Economy

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Polarization has become a key concern in society worldwide– it is talked about by politicians as well as the media and has become a focal point in research (Finkel et al., 2020). Defined as a gradual change of opinion toward one of two opposing viewpoints (Kligler-Vilenchik et al., 2020), polarization is apparent in the increasing number of protests over the last decade (IEP, 2022), in people's voting behavior (with votes for centrist parties decreasing in many Western countries) as well as in their everyday life, where social networks have become increasingly homogenous (Iyengar et al., 2019). One might be tempted to infer from such phenomena that people are moving further apart from each other in their attitudes and beliefs. Yet, research in various countries characterized by concerns for polarization, including the Netherlands and the US, suggests that people's attitudes and beliefs might not be as polarized as they appear (den Ridder et al., 2021; Finkel et al., 2020). For instance, when Dutch citizens were asked about how similar they perceive others' opinions to be compared to their own, a majority (65%) responded that they believe other people in the Netherlands think partly the same as them (den Ridder et al., 2021). Moreover, research suggests that attitudes themselves have not become more radical over the past years (Dekker & den Ridder, 2019; Finkel et al., 2020; Gestefeld et al., 2022).

How, then, can this apparent contradiction be explained? What could account for the appearance of greater polarization due to increased demonstrations or increasingly antagonistic politics in a society, when attitudes themselves are not more polarized? One possibility is that attitudes in the population *appear* to be more polarized, because people at opposing ends express themselves more or because more people for some reason choose to express themselves more extremely. The present study aims to investigate this phenomenon of expressing oneself extremely, which we define as voicing opinions and views on those opposing ends. We will do so by looking at the intentions of those who themselves believe they express strong views in an aim to answer the question: *What motivates people to express themselves in an extreme manner?*

Polarization Research and Big Data Approaches

The topic of polarization has been a popular subject of research endeavors in various disciplines such as political science, sociology, and psychology for decades (Finkel et al., 2020). Understandably, as it is framed as a societal problem, and offers good replication possibilities, many scholars have chosen to investigate the matter through quantitative analysis of big samples (e.g. Balietti et al., 2021), while others have developed implicit or observational measures (for a review, see Iyengar et al., 2019; Weller, 2016). However, little research has investigated this matter up close on an individual level. The present study aims to do so by taking an in-depth look at people who express themselves extremely through interviewing them about their views and motivations for expressing themselves.

This approach is largely based on prior research by Postmes et al. (2017), who conducted a survey concerning migration policy in the Netherlands and subsequently interviewed the 80 most extreme scoring participants. When asked to elaborate on their opinion, they found that participants' views concerning migration and their reasons for responding in an extreme manner were much more nuanced than their somewhat black-and-white answers on the survey had suggested. While some scholars view such contrasting results in mixed method approaches as problematic, due to the incompatibility of the results, they can also be viewed as complementary, revealing a more holistic view of the research topic at hand (Slonim-Nevo & Nevo, 2009).

The phenomenon that people who hold quite moderate and nuanced opinions can sometimes express quite extreme attitudes is not just known from survey data. Social media activity too has become a focal point of polarization research to investigate what brings about this trend of apparent polarization. Indeed, a large body of research suggests that social media usage might play a role in polarization (for an overview, see Van Bavel et al., 2021). In one such study in the US, the authors found that participants who deleted their Facebook accounts prior to elections were less politically polarized (Allcott et al., 2020). Within this large body of research investigating social media and polarization, there are numerous concepts which attempt to explain the role of social media in polarization through various

mechanisms (e.g., echo chambers, attention economies, communication style). However, as with other polarization research, most studies utilize the advantage of big data sets that social media offers and observational data or self-report data which can be easily obtained. While these approaches aided in building concepts that might explain apparent polarization through social media, we propose that this can be taken a step further by not only investigating the output and post hoc attitudes of people on social media but their intentions of expressing themselves in a polarized fashion in the first place.

Mechanisms of Social Media Polarization

To put the effects of social media on polarization into context, we will now explore a few concepts that aim to explain why polarization on social media occurs. While there are many approaches to explain polarization (for an overview, consult Kubin & von Sikorski, 2021), the ones we will focus on are (a) echo chambers, (b) attention engagement, and (c) online-specific language usage.

Some research suggests that "echo chambers" or "filter bubbles" are responsible for polarization (e.g. Brady et al., 2020; Feezell, 2016; Johnson et al., 2020; Sunstein, 2018). The basic idea is that various factors such as social media algorithms and personal preferences lead to online self-selection into homogeneous groups. In such environments, people are selectively exposed to congenial partisan content, such as news or opinions. This selective exposure leads to people encountering arguments that support their own point of view subsequently enforcing their opinions and polarizing them (e.g. Brady et al., 2020; Sunstein, 2002, 2018). While this idea has been very popular in explaining polarization induced by social media, it has been debated recently (Van Bavel et al., 2021). For example, when tested, exposing participants to *opposing* views on Twitter led to an increase in polarization among Republicans (Bail et al., 2018), as did exposing participants identifying as anti-populist to populist media (Müller et al., 2017). This stands in contrast to the idea of echo chambers, which argues that it is the exposure to similar partisan content that leads to polarization.

Furthermore, the exposure to uncongenial content is related to the attention economy that social media's success is based on. Research has shown that divisive and emotionally charged content tends to invite more engagement, which has various consequences (e.g. Stieglitz & Dang-Xuan, 2014; Van Bavel et al., 2021). Firstly, since it lies in the interest of social media providers to capture people's attention for as long as possible, it incentivizes them to create algorithms that promote such content to keep people on the platform longer, generating financial revenue (Thompson et al., 2020). Secondly, it motivates politically active individuals and leaders to create divisive content to gain exposure (Van Bavel et al., 2021). Such effects would make the social media landscape appear polarized, while it might not accurately reflect people's beliefs and attitudes.

Lastly, the use of language in online settings should be considered. People, in general, spend more time on social media than ever before (Statista Research, 2022). Research by Roos et al. (2020) suggests that this shift in communication medium might lead to more perceived polarization, as conversing online can inhibit people's use of certain diplomatic features that are present in face-to-face conversation: the need to express themselves through restricted channels forces them to use short and clear utterances which can easily be interpreted as opinionated, blunt or coarse. This could make people interpret the content they encounter as more polarized than it was intended to be, or than it objectively is (Roos et al., 2020).

What is striking about this research, however, is that the perspective of those who express themselves extremely online is rarely examined in-depth. Therefore, it would appear that new insights can be gained by comparing people's in-depth considerations and motives concerning a particular topic, with their expressed attitudes in formats that restrict their ability to explain themselves, such as attitude surveys but also online communication. This method might help us to gain a better understanding of how people's social motives compare to the signals they send through restricted channels such as survey forms or online communication tools.

The Perceived Polarization of Climate Change: The Economy Versus Climate Policy

An issue consistently encountered when considering polarization is that of climate change (O'Dea et al., 2018). Most people in Europe believe that climate change is happening, and a vast majority believe it is anthropogenic and views it as a threat (Hawkins & Kimaram, 2022; Poortinga et al., 2018). Yet, the topic still appears controversial, as outlier opinions (i.e. those of climate change skeptics) contract a great deal of media attention through campaigns such as "climategate" or politicians openly outing themselves as climate deniers (Boykoff, 2013). Thus, although in reality the population is largely united behind the idea that climate change is real and actionable, these perceptions lead to an impression that society is divided and two groups (pro- and anti climate action) that are strongly opposed. The number of protests and the formation and growth of climate-oriented movements (e.g. Extinction Rebellion, Fridays for Future) reinforce this perception that there are strong forces opposing climate action. Because the population statistics suggest this is a clear case of apparent polarization, this topic would appear to be ideally suited to examine our research question.

Zooming in on an interesting feature of the climate issue, one topic that has attracted much attention in the Netherlands recently is the economic consequences of climate policy plans, such as the European Green Deal (van Kuyck, 2020). Prominent politicians including Thierry Baudet (FvD), Buma (CDA) and Rutte (VVD) have framed the issue of such consequential plans as if climate action would be harmful to economic growth, creating an impression that the two are antagonistic and creating conditions for group polarization into 'pro-climate' versus 'pro-economy' factions. This kind of framing is also apparent in online debates and discussions surrounding the topic. For example, the WebCare team of Milieudefensie, an influential climate organization in the Netherlands, said this topic is among the most discussed and controversial topics on their social media platforms (Milieudefensie, personal conversation, January 18, 2022). Debates address the costs of policy implementations as well as the effects they will have on large companies. Opponents of climate policies argue that policies would chase away these large companies, and subsequently break the economy (Können, 2021). On the other side, climate policy

proponents argue that the economy does not matter when it comes to climate change. Because this topic seems ideally suited to examining this phenomenon of perceived group polarization, we chose to focus on this topic and investigate the opinion of people voicing extreme viewpoints further, to gain insights into their underlying motivations.

The Present Study

The present study closely studies the beliefs and attitudes as well as social media and offline actions of people who express themselves extremely about the topic of climate policy and the economy. We conducted in-depth interviews to better understand their motivations for expressing themselves extremely online and possibly elsewhere. For sampling, we collaborated with Milieudefensie, an environmental organization that encounters polarizing debates about the topic on its social media platforms. We chose to focus on Twitter, partly because much research has looked into Twitter in the context of polarization (e.g. Kligler-Vilenchik et al., 2020) and partly because Milieudefensie's WebCare Team observed the most polarizing activity on Twitter (Milieudefensie, personal conversation, January 18, 2022). Milieudefensie's Twitter account was then used to promote a survey that we created. The purpose of the survey was to select participants suitable to be interviewed: based on several criteria we selected the most extreme scoring participants. Participants who matched these criteria and were willing to take part in an online interview were then invited and interviewed about their opinions regarding the topic as well as their social media habits and intentions. After the interviews were transcribed, a qualitative analysis was carried out following the principles of a qualitative content analysis (Drisko et al., 2015).

Methods

For the present study, we applied a mixed methods approach where a quantitative survey was used to determine the level of polarization of participants as well as their need to express themselves. This survey served as the base for sampling the interviewees for the main qualitative part of the study, as well as a comparative measure, to get an overview of

our participant pool. The quantitative survey will further be referred to as phase 1 whereas the qualitative part will be referred to as phase 2.

Phase 1

Participants

For sampling, we collaborated with Milieudefensie, an environmental organization in the Netherlands, who promoted our survey on their Twitter account through prompts such as "The #climate can evoke intense emotions. Do you also experience that? And do you let them out on #Twitter? Would you like to participate in a #researchproject by the University of Groningen?" (for an overview of all Tweets, see Appendix A). The prompts were posted between June 22, 2022, and July 1, 2022. Our initial sample for the quantitative survey consisted of 61 participants. We further removed two participants, because they did not complete the survey, which led to a total sample size of 59 participants. The sample consisted of 20 female participants (34%), 36 male participants (61%), two participants who indicated 'other', and one participant who preferred to not indicate their gender, aged 21 to 76 (M_{age}=51.57, SD_{age}=13.74). All participants were Dutch, except for one American participant, and 28 participants (48%) provided their email addresses to be contacted for a possible follow-up interview. Participation in the survey was voluntary, no compensation was granted, and the study was approved by the Ethics Committee of the Faculty of Behavioral and Social Sciences.

Materials

To measure participants' attitudes, we developed a survey on the platform Qualtrics (www.qualtrics.com) consisting of six items – three items measuring their opinion on the topic of climate policy versus the economy and three items measuring their need to express themselves. The first set of items measuring participants' opinions were 1) "The climate policies of the EU and NL completely destroy our economy", 2) "To avoid a climate catastrophe and save our planet, the economy may bleed" and 3) "Climate policies and the economy are each other's polar opposite". The second set of items measuring participants' need to express themselves consisted of 4) "I would not hesitate to voice my opinion in the

debate on climate policy and the economy", 5) "When I hear the debate over climate policy and the economy, I feel like I have to let my voice be heard" and 6) "I think it is important to have my say in the public debate on climate policy and the economy". All items were measured on a 7-point-Likert scale with answer options ranging from 1="completely disagree" to 7="completely agree".

Procedure

Through the Milieudefensie Twitter account, participants were prompted to participate in our survey study, by clicking on a link featured in the prompt. Following the link, they were presented with information about the study as well as a consent form. After providing consent, participants were forwarded to the survey which included the attitude measure as well as demographic measures, asking them to indicate their gender, age, and nationality. Finally, participants were asked to leave their email addresses if they were open to being contacted for a follow-up interview.

Phase 2

Participants

We created inclusion criteria to determine the most extreme scoring participants. This entailed participants featuring at least two scores of 1,2,6 or 7, including at least one score of 1 or 7, among the first set of questions determining their viewpoint on the topic and featuring at least 2 scores of 6,7 on the set of questions determining their need to express themselves.

Based on our inclusion criteria, we contacted 18 participants, of whom 6 responded and were interviewed between July 4, 2022, and July 8, 2022. This included two female and four male participants, aged 48 to 72 (M_{age}=61.67, SD_{age}=10.37), five of whom were Dutch and one American. Participation was voluntary and no compensation was granted to participants for their participation.

Interviews

Interviews followed a semi-structured format which was designed for a duration of approximately 20 minutes. As participants were Dutch-speaking and a language barrier of

some researchers of the study existed, a Dutch student assistant was hired to conduct the interviews together with one of the researchers. All personal details of participants, such as their email addresses or emails they sent were deleted before the interview and the participants were assigned a participant identifier. Interviews were held on Google Meet and had a duration from 13.93 to 29.97 minutes ($M_{minutes}$=22.59, $SD_{minutes}$=6.37). Interviews began by verbally ensuring informed consent followed by a guide of questions which was split into two parts. In the first part, participants were asked to elaborate on their opinion about climate policy and the economy while the second part consisted of inquiries about their social media habits, intentions behind them, such as whom they hope to reach with their online actions, and possible actions they take offline (for the full questionnaire, see Appendix B) Lastly, participants were asked about what their hopes for the future and were and offered the opportunity to ask questions.

Analysis

For the analysis, a qualitative content analysis was conducted following the procedure described by Drisko et al. (2015).

Transcription. All interviews were recorded as audio files and transcribed manually by the native Dutch-speaking student assistant. These transcripts served as the base for the analysis. The anonymity of participants was ensured by deleting audio files directly after transcription and denominating participants by their corresponding identifiers in combination with the abbreviation "P" (participant). Transcripts were analyzed in Dutch, while some excerpts were translated to English for presentation in this paper. All translations made can be found in Appendix D. In the result section, square brackets were used to mark the omission of words or sentences for the sake of context or readability of the featured quotes.

Coding and Developing Themes. The interview transcripts were analyzed in the program Delve (Twenty To Nine, LLC, 2022) and were coded by the researcher present during the interviews. Due to the nature and scope of the project being a Master thesis, no second coder was used. We predominantly used an inductive approach to coding the data, due to the exploratory nature of our research project. The only deductive codes we used

referred to our research question and were "online action" and "offline action". After familiarizing ourselves with the data by repeatedly reading all transcripts, we began coding the data. These codes were then developed into overarching themes, based on commonalities in their content. This was an iterative process. During the coding phase, the researchers consulted about and discussed the patterns and narratives that became apparent as we went through the process. These discussions aided in the framing of the codes and themes into a narrative and were fundamental to the interpretive part of our analysis. An overview and description of all themes and their corresponding codes can be found in Appendix E.

Results

In the present study, we zoomed in on participants' views and intentions behind expressing themselves extremely online and in other ways to investigate the attitudes and views they hold. To do this we first sampled a pool of participants through an online survey, out of which the most extreme scoring participants were selected and invited to interviews. First, the general sample pool of the survey will be analyzed to get an overview of the sample from which the interviewees were selected from. Then, we will go into more detail through a qualitative analysis of the interviews and propose possible interpretations of the findings.

Phase 1: The Survey

To analyze the survey items, it is useful to group them into subgroups: The first set of items investigates participants' opinions on the topic of climate policy and the economy as well as the participant's perceived polarization of the topic, whereas the second set looks at participants' need to express themselves about the topic.

In the first set, the first item (pro-economy) measured pro-economy and anti-climate policy attitudes (M=2.27, SD=1.68, $skewness$=-1.70, the second item (pro-climate) anti-economy and pro-climate attitudes (M=5.68, SD=1.40, $skewness$=-1.56), and the third item (polarization impression) was a neutral item about the general polarizing perception of the topic (M=2.98, SD=1.737, $skewness$=.803). Our results show that our sample, overall, was more favorable to climate policy compared to the economy, which can also be observed in

the skewness of the single items. Overall, there was a moderate negative correlation between the pro-economy and pro-climate items, r=-.31, p=.018, indicating that participants' attitudes across the two items indeed were moderately consistent (i.e., anti-economy and pro-climate policy). Additionally, the pro-economy and the polarization perception item were significantly positively correlated, r=.359, p=.005. This implies that participants who perceived climate policy to be detrimental to the economy also believed that the two concepts were polar opposites and further that people who did not think climate policy would ruin the economy also thought they were not mutually exclusive concepts. No significant correlation was found between the anti-economy and the polarization perception variable.

The second set of items (items 4-6) consisted of three items that addressed the participants' need to express themselves about the topic. All three items were significantly positively correlated (Table 1) and were collapsed into a composite score (α=.66), indicating participants' general need to express themselves (*M*=5.48, *SD*=.94). This suggests that participants in the sample, in general, had a need to express themselves about the topic.

Table 1

Correlation Table of Need To Express Items

	Spearman's Correlation	
	Item 4	**Item 5**
Item 5	,364[**]	-
Item 6	,480[**]	540[**]

**p<.01

Selected Participants

Out of the 59 sampled participants, we contacted 18 based on our predetermined selection criteria (see Method section) and whether they were interested in taking part in an interview (i.e. provided their email address). Out of these 18 participants, six participants participated in the interviews. The selected participants, on average, showed lower pro-economy attitudes (*M*=1.33, *SD*=.516), higher anti-economy attitudes (*M*=6.17, *SD*=753),

lower polarization perceptions (M=2.67, SD=1.63), and a higher need to express themselves (M=6.33, SD=.56). Of these scores, the need to express was the only value that was statistically significantly different from the rest of the sample, t(57)= -2.43, p= .018, 95% CI=[-1,73, -0,17], although it should be noted that this analysis compares a small group of six participants with a larger group and accordingly the p-value is only of limited diagnostic value. In sum, these values suggest that the sample for the interviews consisted of climate policy proponents and no economy proponents, all of whom felt a need to express themselves about this issue. This also holds true when looking at the individual scores and was apparent during the interviews.

Phase 2: The Interviews

We began the interviews by asking participants about their opinions regarding climate policy and the economy to get a deeper insight into their views and give them the opportunity to express them. We followed this up by inquiring about the actions they take online and otherwise and their intentions behind these actions. This structure was designed to get deeper insights into our research question, namely *what are the attitudes and views of people who express themselves extremely?*

We will begin by first investigating what participants' online and offline actions look like as well as what their intentions are when executing these actions to obtain a general overview of their behavior and intentions and provide a setting, before diving deeper into their views and opinions which they express through these actions.

Online and Offline Action

As we collected our sample by promoting our survey on the social media platform Twitter, it can be assumed that all participants are active online to some extent. We began this interview section by asking participants "Some people are also active online, for example on Twitter. Do you do that too?" followed by some probing questions such as "Who is your target group? Why?" or "What do you hope to achieve with this?". We then also asked participants "Is this (your online action) related to you taking action offline?" and "What is your drive to be active online? Is this related to you taking action offline?".

Participants' motivations and methods of online activity, specifically social media usage varied. Common themes were (a) sharing content to raise awareness and inform others, (b) using social media to express their opinions or emotions, (c) supporting organizations and individuals they believed in by retweeting as well as (d) informing themselves. The social media platforms mentioned by participants were Twitter, LinkedIn, and Facebook.

Informing Others and Raising Awareness. When we asked our participants what they want to achieve with their social media activity, the most frequently mentioned reason was to inform others or raise awareness about the issue of climate change. For example, one participant mentions: "[I am] active online to remind everyone of it [the climate crisis], think about it, because a lot has to happen if we want to save this earth."(P4). Like this participant, another participant also focuses on the protection of the earth. When talking about their motivations to be active, they say they are:

> […] trying to challenge people who consume or use or waste a lot of this earth, to make them more aware that we do not have another earth and that we have to be frugal, and that we have to do that now. (P5)

While the motivation behind the two statements featured might be similar, they differ in their quality of assertiveness as well as their focus of the role the earth plays in the issue of climate change. P4 takes more of a passive approach, putting information out there while the aim of P5 is to challenge people with this information. Secondly, while we will discuss this later in more detail (See Section Concerns about the Status Quo), it is interesting to note that P4 personifies "the earth" as something to be saved, while P5 stresses the dependence of humanity on the earth.

While the overarching goal, as framed by participants, appears to be to reach other people in order to inform or influence them, it appears to not be relevant how many people they reach. One participant mentions:

The people who read my tweet will of course think about what it means, and if they

think through it carefully, they will realize that I think it is important that attention is

paid to the environment […]. So it's to make people think as much as possible. (P4)

Interestingly, this same participant also says: "[..] look I have had few reactions on it, I

believe three or four, my group of followers is not that big either, but, well, it is important to

me that people think about it as much as possible[…]." (P4). This shows an interesting detail,

namely that the participant is of the impression that his tweet will make people think about

the environment, while at the same time they are aware that they do not reach a lot of people

since their following is small. Similarly, another participant says:

I only have 48 followers, but I also link Milieudefensie. In any case, I want to express

my opinion, and then I'll see if there are reactions to it. There are hardly any

responses, but that's the way it is." (P3)

Just like the other participant, they are aware of not reaching a lot of people yet feel the need

to express their views by creating or sharing content online.

While all participants did mention that they were active on social media and most of

them also actively put out content through retweets or their own posts, some also mentioned

that, while they want to inform people, they do not necessarily always want to engage with

others. To illustrate one participant mentions:

Yes, online [action] is more about informing people, but only if I think it could be a

promising conversation. If it's someone who just wants to vent, I'll leave it be. I have

to be very careful how much energy I put into it, it can suck a lot of energy, and you

shouldn't do that. (P6)

Another participant also mentions this negative association by saying: "Well, I have to say

that I'm honestly busy with [social media] as little possible, because, well, it affects my

enjoyment of life in a negative way."(P2). This shows an interesting dynamic where on the

one hand, participants want others to engage with and read their content, while on the other

hand, they do not want to do so themselves. One interpretation of this could be that they

themselves feel like are already familiar with what the correct opinion and behavior is and

therefore do not need to engage with social media anymore, while other can still learn from them. In other words, they could be perceived as suggesting a sense of moral superiority. We will discuss more about how participants view "other people" in the respective section. However, this obvious discrepancy in online behavior should be pointed out.

      Expressing Opinions, Emotions and Support. In line with survey results, the participants also mentioned that they felt they need to express their opinions and emotions online. For example, one participant said:

> Well, look, I notice when looking at myself that I've been less active lately. There is so much tweeting and writing that you also think, the chaos only gets bigger with every message that is thrown into the world. The goal I have in mind – clarity - sometimes I wonder if I can still achieve that by giving my opinion. But I can't help it either. (P1)

This quote illustrates the need of expressing an opinion, even though the participant questions its effect on the overarching goal they have in mind. Another participant gives an example of a tweet they posted in response to a situation, saying:

> I am a twitterer, but more of a reader than a poster. But then I go back to last week, there was Gert Jan Oplaat, a VVD politician, in a TV chat show. But he announced there that, based on the nitrogen discussion, he thought it was a reason to cancel his VVD membership at the moment, and he did not yet know which club he will go to now. And what do I tweet then: that Mr. Oplaat is leaving the VVD because destroying the earth is not happening fast enough for him. That was what I expressed. (P4)

In this quote, the participant mentions a situation, outside of social media and in a political context, that triggered them to become active online, even though they mention before that they are more of a consumer of content than a producer. Specifically, they use their social media to criticize a politician and accuse them of being motivated to destroy the earth fast. This is potentially designed to insult or ridicule the politician involved while painting them as an intentionally villainous actor. It may not have been written as a hostile or violent act, but it is clearly the kind of extreme or polarizing utterance in which we are interested in this study. This same participant also mentioned that his intentions to be active online were "to make

people think as much as possible" and "give a little push where possible" (P4). When connecting this to the content of the tweet they described, the intention might go beyond just informing people about climate issues and instead becomes political.

This notion of influencing politics and reaching the government through their ideas is also reflected in what other participants shared. When asked about who the target group of their tweets is, one participant says: "Preferably politics, but also by showing that you support environmental organizations, that they can still show greater [public] support, also to politics, so mostly that."(P6) Indeed, this idea of supporting others by engaging with their content on social media is something frequently mentioned throughout the interviews.

Informing Themselves. Lastly, participants mentioned using social media to stay informed about current or past events. To illustrate, one participant mentions: "I try to see [the tweets I save] a bit like my personal library. I look at it every now and then."(P3) This strategy of using social media as a library of information might have implications regarding the participant's viewpoints and way of thinking. Twitter, while providing a platform to share news, does not focus on providing evidence-based, balanced news, meaning the participants' "library" might be biased in its content. We could speculate, that these sorts of uses for social media could partly help to explain the participants' extreme viewpoints regarding this topic through selective exposure to similar content. However, a detailed view of the contents of the participant's Twitter account would be necessary to investigate this more closely. Nonetheless, the implications of using social media as an information source are worthwhile to consider.

Offline Behavior. All participants also said that next to being active online, they were active offline as well and gave various examples of what this looks like for them personally. While we did specifically ask about their offline actions later in the interview, most participants mentioned spontaneously that they are actively doing something before the question was asked, which might mean that it was important to them to point this out. Most frequently participants mentioned their personal pro-environmental behaviors such as "We live sustainably, frugally, economically. We have solar panels, insulated house, electric car,

we buy local and organic, I am vegetarian, not a single piece of meat comes down my throat, that is irresponsible in these times."(P1).

Next to this, participants also mention activist behaviors such as supporting organizations with money, being part of organizations or community projects, writing letters to their municipalities, or taking part in demonstrations. When talking about recently having taken part in a demonstration for the first time, one participant mentions: "Normally I follow a lot of news and opinion, but now I think I have to take action myself, yes."(P5) This sense of "having to" take action emphasizes that actions are compelled by a sense of urgency (discussed in the following section) for the participant, in that they believe the issue of climate change has reached a point where they themselves feel that they feel personally responsible to engage actively offline (as well as online).

Contributing Their Part. Many participants specifically mention they take action to contribute their part. For example, when talking about possibly taking part in an upcoming demonstration, one participant mentions: "I'm still doubting whether I will take part in that, I cannot say yet. But it is something that goes through my head, thinking I'll take part, because every bit that I can contribute is a nice bonus." (P4) Interesting in this extract is that the participant implicitly says they want to contribute to something, but does not make explicit what that something is. This terminology of implicitly contributing to a bigger (presumably collective) effort is also present in other contexts such as engaging in conversations with others, like this participant mentions:

> […] I try to contribute […] in my own way, and also talk about it with other people, rather not to discuss it, because usually that just solidifies the points of view, but to talk to them, and I try to tempt them through looking at things differently and thinking about them differently. (P1)

It is also interesting to note here that the way our respondents interpret what "doing their part" entails, differs. While for some participants doing their part means engaging with others in conversation (P1), for others it means taking part in demonstrations (P4). Overall, personal contribution and involvement in offline action, next to everyday pro-environmental

behavior, were something all participants engaged in, to various degrees. This included community projects (P1, P6), supporting environmental organizations (P3, P5, P6), having jobs related to environmentalism (P2), contacting government officials (P1, P6) as well as going to demonstrations (P3, P4, P5). Specifically, participants appear to feel a personal responsibility to take action as well as seem to perceive themselves as making a contribution to a bigger movement or effort. To illustrate, one participant mentions "Even though I am not active as an activist on the front line, I am not a front runner, I do try to represent and support the good cause as much as possible." (P3). While the participant does not clearly define what "the good cause" is, it could be assumed to entail counteracting climate change or "saving the earth" as another participant puts it.

Therefore, the motives participants show for being active online and offline, can be summarized as a) influencing others through information, b) expressing their emotions, c) informing themselves and d) fulfilling a perceived a sense of personal responsibility to contribute to a bigger cause. We will now take a deeper look into their views on the topic of climate policy and the economy to put these motives into context.

Views on Climate Policy and The Economy

As the statistical results from participants' survey responses suggested, all participants were indeed proponents of climate policy while seeing the economy as problematic. Overall, it is interesting to note most of our respondents essentially ignored the breadth of our first question about climate policy and the economy and mainly talked about the urgency of the climate crisis. It is as if the importance and magnitude of the climate issue, for these respondents, eclipse the economic issues and policy issues altogether.

Indeed, when specifically asked about the economy, the general consensus among participants in our sample was that the economy is not a priority when it comes to the topic of climate or climate policies. However, the nuance with which participants address the topic of the economy varies. In the corpus there are extreme positions that completely disregard any attention to the economy. This is illustrated by quotes like "The economy does not matter"(P1), "I think climate change and environmental destruction in all sorts of ways is such

a priority, it ranks above the economy."(P5). But there are also slightly more nuanced views in the corpus: expressions that the current situation is unsatisfactory but that adjustments can be made that allow for a co-existence of a focus on the economy and the climate. One illustration is a quote from P3 that "I would actually like the Dutch government to focus on the climate problem and adjust the economy accordingly. Because the climate problem is problem number one in this world, and that's denied everywhere." (P3).

Next to these general statements, participants also gave more detailed descriptions of their opinion on how the economy should function. One participant addresses quick profit making as opposed to long-term investments in the context of sustainability. They say:

We must assess the economy differently and give it a different definition, it's not about how much money the government gets or something. It's about 'Is it sustainable?'. If it is not sustainable, it is not profitable in the long run. Then it is profitable today, and tomorrow you will have nothing. Well, that's just stupid. So, we are simply investing a lot in things where we know: [..] in a few years it will no longer be of any use to us. If it is not sustainable, then you should not actually invest in it. (P6)

In this quote, the participant appears to attempt to show a holistic view of the interplay between the economy and sustainability long-term, arguing that a re-definition of what the term economy means and how it is assessed is necessary. Other participants voice similar ideas of redefinition or restructuring of the economy, for example:

We must move towards a so-called stationary, circular economy in this world. And that means that growth is a word that really should be banned. […] because growth means more economic activity, and every economic activity that we currently still tackle with fossil energy is harmful to the climate." (P4)

Noticeably, while in the quote before, the participant (P6) looked into the future and based their argument on long-term profits, this participant (P4) bases his argument on current problems. For example, they assume that economic activity is always tied to fossil fuels and

therefore, instead of suggesting a different type of energy, argue that the economy as a whole should be restructured.

While the overall idea might be the same, it is interesting to look at the base of the opinions participants voice as well as whether they attempt to suggest practical changes. When asking participant P4 to elaborate ("So you think it should be reduced? Or how would you see that?") they answer with "Well, it's also things I've heard from people who have a certain reputation in this world." (P4). Instead of explaining they go on by listing names of people they follow and close their statement with "And it's not like I'm imitating them, but I'm of the same opinion. That things must happen because it is already getting too late."(P4)

These quotes leave some room for interpretation. Firstly, the participant begins by listing an argumentative chain ending with a statement about the connection of the economy to fossil energy. When listing the argument, they have a clear thread that they follow, giving the impression they are well informed about the topic. However, when asked to elaborate, they cannot do so and refer to other people "who have a certain reputation in this world". When listing some of these people, they mention people like Ramsey Nasr, a Dutch writer. While we will go into this in more detail in a later section, it is worth noting here that the same participant also suggests that people must be an expert to have an opinion on topics concerning nitrogen. Yet, he does not appear to think the same applies to the area of economics.

The participant also specifically points out that they are not imitating others, but have their own opinion. However, the opinion they give does not refer to the argument about the economy they made before but is voiced as a general and ambiguous statement. This could imply that they are adopting and repeating arguments from other influential people who align with their general idea that "things must happen" urgently, while not reflecting on the details these views entail. This sort of engagement is something that could lead to sharing and reproducing extreme online expressions, without necessarily having a deeper understanding of the content and its implications.

When recalling that both participant P6 and P4 scored extremely on our survey, their respective quotes about the economy exemplify the nuance of opinions and views behind their extreme scores. This nuance can also be seen by the general quotes about the economy of the other participants, ranging from complete disregard of the economy itself to frustration with the system as it functions right now.

Next to general visions on the topics of the economy and climate policy, several other themes emerged as being central to participants' views on climate policy and the economy, namely a) *concerns about the status quo*, b) the role of *the government* c) the political actions of *farmers* and d) *other people*.

Worries, existential threat and urgency. Overall, all participants voiced strong concerns about the current state of the Netherlands or the world. This ranged from "worries about the earth continuing to exist" (P5), that it needs saving (P4), and that we are living in "an existential crisis" (P6).

As noted before, it is interesting to observe, how "the earth" is personified by P4 and seen as a victim that needs saving, though the earth itself will keep on existing, something P5 voices as a worry. What participants are advocating for is the preservation of nature in its current state in order for humanity to survive and thrive on earth, which P6 terms as an "existential crisis". The language of P5 and P4 could perhaps serve the use of lending an overall target for climate action and construct a simpler narrative that people can follow. The notion of survival and fight for humanity is also present in other participants' ideas. When asked about their position in the debate about climate policy and the economy one participant says "Well look, the economy doesn't matter. It is about decent survival on this earth, that must be a top priority for us and the people after us." (P1) Indeed, half of the participants, also voiced concerns for future generations or their children, such as "By the time my kids reach my age, we'll be under 10 feet of water here, where I'm sitting now."(P6) or

Look in 10 years or so I won't be here anymore. But my children, I have younger

children, they will have to deal with it later. I also have grandchildren. There must also

be a beautiful world left for them. And I fight for that. (P1)

Here, P1 clearly lays out their motivations for their actions, going as far as to say they would "fight" for that, implying that there is something to fight against.

These notions of surviving are closely connected to a sense of urgency, all participants experience. For example, one participant said: "Yes and my opinion is always […] that something has to be done urgently to keep this world livable." (P4) while another mentions "[…] I am sending the same message on one level as well as the other. It's urgent, it's urgent, it's urgent."(P1)

Alongside existential worries, participants also voiced a need for change. This change refers to how the government deals with climate change (P1), change in the economy (P5), and changes in people's behavior. To illustrate, one participant says: "I try to show people that change is possible and that you don't have to be afraid of change."(P1). Similarly, other participants also stress, that people changing might be something difficult or scary exemplified by quotes like "I mean […] yes people are apparently very afraid of change, while there are actually a lot of advantages to indeed go into the transition."(P2) or "[Change] is a form of art that you can learn, we can retrain people."(P6).

In sum, a sense of existential threat and the resulting urgency appear to be an underlying motivational factor for participants' online and offline actions exemplified through notions such as "[…] not a single piece of meat comes down my throat that is irresponsible, at these times." (P1), "[…] but now I think I have to take action myself, yes."(P5) or "[…] we have to be frugal, and that we have to do that now." (P5). The extreme response patterns of our respondents and their high need to express themselves might therefore be explained by the urgency of responding to a threat of this magnitude, as they perceive it. The need for change they state could also follow from this threat perception, though the focal point of that change appears to be placed differently among participants ranging from focusing on individuals to a government level. Nevertheless, participants appear to be motivated by the

urgency that follows from their perception of climate-related issues, to a point where they view the problem as an existential threat that urges them to act.

The Government, "The Farmers" and "Other People"

During the interviews participants also consistently mentioned three entities (a) the government, (b) "the farmers" and (c) "other people", whereby the first two evoked negative responses and the latter mixed responses. We will now go into more detail showing how participants view the Dutch government, how they frame "the farmers" as an outgroup and what they assume about other people.

The Government. The government, the way it is structured, and the way climate policies are executed were reoccurring themes in participants' responses. Two of our interview questions specifically addressed the topic of government, by asking "Should the government change something in the way they treat climate policies?" and "Apart from your evaluation about what climate policy looks like right now, do you think that the government executes these policies well?" (for the original Dutch questionnaire see Appendix B). However, the topic of "the government" also reoccurred throughout the full interviews. Interestingly, while all participants in our sample identified as a proponent of climate policies – a governmental task – most participants had negative feelings about the current government. Critiques of the government ranged from rather mild statements like: "[…] the whole liberal government that we've known in recent years gives way too much space to interest groups so that only discussions arise between groups. Instead of there being a clear line." (P1) to more extreme expressions such as:

> So, I believe and I think that the Dutch government has completely failed and I would really like all those Pharisees to just disappear and that, like it was suggested in Italy, a number of technocrats are hired, who will solve all problems quickly and really do solve them. (P3)

This quote demonstrates this participant's extreme discontent with the Dutch government - next to pointing out that the government "completely failed", the participant also uses a biblical term, used as a swear word in Dutch culture to denominate someone as hypocritical

and deceptive. They point out how the government response to climate change is better addressed in another country (Italy), and how the change they propose would be a quick solution for all problems, again implying a need for urgency to solve problems and the existence of a certain straightforward answer. It is interesting to consider this participant's extreme view on the government and consider the actions they take compared to other participants. While other participants in some ways hope to influence government for example by contacting government officials (P1, P6) or posting Tweets they hope the government will see (P5), this participant instead advocates for a completely new government and takes action by expressing themselves through going to demonstrations and posting tweets when they are angry, as well as supporting environmental organizations such as Milieudefensie, Greenpeace or Extinction Rebellion. Their approach to criticize the government, therefore, appears to be through expressing their, in some cases negative, opinion publicly but not addressing the government directly.

Overall, five of six participants had views about what the government *should* be doing, as opposed to what the current status quo is. This ranged from general statements to more concrete ideas. General statements included quotes like "I would actually like the Dutch government to focus on the climate problem and adjust the economy accordingly." (P3) or "[…] a prime minister should just stand there and say guys we have a problem and we have to come up with a solution, it's all, well, very little actually happens" (P2). Examples of more concrete ideas are "Giving everyone a basic budget for energy tax that you are allowed to use, and anything that is extra costs a lot." (P5) or "For example, we can ban advertising about gambling and smoking, because that is bad for your health. Well, let's be on the same page with whether it is sustainable. Yes, then you can advertise, and if not, you can't."(P6). Like the two examples above, many participants see economic solutions as worthwhile, for example by making unsustainable practices less profitable or providing monetary incentives promoting sustainable behavior. It is interesting to consider here, that while the general consensus among participants about the role of the economy in the debate about climate policy was to not prioritize the economy, they propose using economic measures as tools to

incentivize and penalize actions related to climate change. While it should be noted that this might have been prompted by the context of the interviews (i.e. climate policy and the economy), some participants had very clear ideas of how the economy should function in a sustainable setting.

Farmers. Four out of six participants (P1,P2,P3,P4) also put a special focus on farmers and/or the government's response to farmers' protesting. This may have been a consequence of the timing of the interviews, which was in the midst of protests against the government's new nitrogen restrictions for farmers. Interestingly, participants have different ways of approaching the subject. For example, one participant says:

> I mean that the farmers are allowed to do their own thing, and they should have been dealt with harshly. […] the Dutch government handles those climate activists harshly, they are arrested, go to jail for a while, they get a criminal record. But those farmers get away with everything […].(P3)

This example illustrates that the participant sees the farmers as an advantaged group who receive preferential treatment from the government compared to climate activists, whom the participant supports. This group difference is something another participant also notices in connection to their social media usage:

> Twitter is of course also a chat box - an example of this was also last week's newspaper of a farmer saying yes, I only see positive reactions on Facebook and Twitter and then I think yes, that is your bubble, actually, I only see but negative reactions. (P2)

In this example, the participant also refers to the farmer as part of an outgroup. Interestingly, they are aware that what they call "bubbles" exist, since they contrast the statement of the farmer with their own experience. They therefore do not say that the farmer's experience is wrong, but that they have different perceptions. Another participant, also aware of this group distinction, says:

> Let me give you an example, I am a born farmer's son myself. I was recently at a birthday party where a few farmers were also present. I got into a discussion about

nitrogen, in this case, and some people blamed me for that. Well, I'll push on

anyways, because I say, well, you can only have an opinion about it if you're also a

chemist, because then you know what happens to that nitrogen in nature, but most

farmers can only use the words: they are mad in The Hague, they are mad in The

Hague - that is of course not an argument, as far as I am concerned. (P4)

This participant is also aware of his group memberships, mentioning being "a born farmer's

son", though he distances himself from this group by calling them "the farmers". Interestingly,

while they appear to have a clear opinion about the topic, they also mention that they believe

you can only have an opinion about it if you are a chemist and that the farmers do not build a

proper argument but are only able to voice basic ad-hominem attacks.

The emergence of this theme is interesting as farmers are clearly painted as an

outgroup participants compare with, while none of our questions touched upon the subject.

However, there are various reasons why this might have been the case. Firstly, the farmers

have received much public and media attention, nationally and internationally, in the past

years, since they started protesting in response to governmental regulations regarding

nitrogen and secondly, they are associated with political parties opposing climate action (i.e.

FvD). Seeing as all our respondents are climate policy proponents and themselves advocate

for their cause through demonstrations, this might explain why they see farmers as an

opposing group. And there is another possible reason why this group was mentioned often:

since our research is about the relationship between climate and economic issues, the

farmers are a relevant group because the issue of nitrogen deposition is also a clear case of

a particular economic approach (bio industry) affecting environmental outcomes. In sum, for

multiple reasons the farmers do indeed appear to be not just a salient but also a relevant

group to consider in this context.

Other People. Lastly, all participants consistently mention "other people". This mainly

revolves around what they think others do wrong and/or should do instead. Mainly

participants think other people should be informed and should start thinking about the effects

of climate change. This is based on participants' assumptions such as "[…] citizens do not

worry about anything because they are […] ignorant."(P3) or "It is all very unclear for people, how to be able to take action."(P2).

Participants see themselves in the role of the informant or educator, for example through their social media activity, as demonstrated by their answers to why they engage in online action. To illustrate, one participant says: "I want to get people to think about it. […] it is important to me that people think about it as much as possible, as I just said, I try to give a little push where possible."(P4) while another mentioned "Trying to influence other people so that they [also know that they] have a certain power as consumers" (P1) or attempting to "convince other people that they themselves can do something to combat climate change." (P5).

Additionally, there are certain assumptions participants voice about others such as "[…] a lot of people are not interested in the facts […]" (P1), "[…] we are dealing with a huge amount of people who are so-called science deniers." (P4) or "After all, people only want to hear things that fit their point of view." (P1). This exemplifies an assumption made by some participants that other people do not care about science or reject it, only following their own point of view, something the participants view as problematic. Noticeably, through the way they phrase it, it could be assumed that participants see themselves as apart from this group and not as subjects to such problems. Like "the farmers", these topics emerged by themselves, without any of our questions addressing them directly.

In conclusion, these views on other people give context to one of the motives for online action that participants stated, namely influencing others through information. Participants appear to perceive themselves as separate from "other people", who some of our respondents see as ignorant or unknowing, and they feel like they can take the role of an educator. This could be interpreted as a sense of moral superiority, that our respondents experience in comparison to others, which is also reflected in the focus participants put on pointing out their various contributions through their pro-environmental lifestyle choices (e.g. vegetarian diet, second hand shopping, solar panels, etc.) or how they provide an example for others to follow like participant P1 when they say:

I try to set a good example myself. We live sustainably, frugally, economically. We have solar panels, insulated house, electric car, we buy local and organic, I am vegetarian, not a single piece of meat comes down my throat, that is irresponsible in these times. (P1)

However, because we can only infer this indirectly from the statements, I want to do no more than suggestion this could play a role: a more targeted investigation is needed of whether participants do indeed experience a sense of moral superiority and whether this motivates their actions.

Discussion

The topic of polarization has received attention from the public and scientific community alike, especially in the realm of social media. However, many research endeavors focus on large sample sizes and observational methods as well as survey data when talking about polarization. We argue that there is reason to believe that while people may express themselves extremely on social media (or indeed on attitude surveys), they might have more sophisticated underlying reasons for doing so that do not actually stem from the extremity of their attitudes, and that their actual opinion might be more nuanced than it appears. To investigate this, we measured participants' attitudes concerning climate policy and the economy in an online survey and interviewed the most extreme scoring participants about their views in more detail as well as inquiring about their social media and offline actions. By this, we aimed to provide answers to the question: *What motivates people to express themselves in an extreme manner?*

While all our interviewed participants scored extremely on our survey, their responses to the topic in the interviews varied in their extremity ranging from diplomatic problem-solving suggestions to extreme stances. Overall, there were some common themes that were featured across interviews. When regarding the intentions participants voiced for being active online and offline, the major themes that stood out were (a) *participants' intention to influence 'other people' through information, (b) informing themselves, and* (c*) expressing opinions, emotions and support.* Further, three major themes were addressed by participants: (a) a

sense of *worry, existential threat and urgency* they experience, (b) negative views of *the government* and (c) a projection of the issue onto an outgroup, i.e. '*The Farmers'*. To investigate the implications of these findings, we will in turn discuss them in detail and connect them to the existing literature on polarization and talk about their possible meaning.

Influencing 'Other People' through Information and Informing Themselves

Most participants indicated that they are active online to inform others with the intention of eliciting a contemplation concerning the issue of climate change. This use of the platform with the intention to share information has also been observed in other studies (Holton et al., 2014; Thompson et al., 2020). Previous research has identified different motivational drivers for sharing news on social media, such as *status-seeking gratification*, referring to the desire to be correct, subsequently strengthening a person's feeling of morality, or *information-sharing gratification*, referring to the person's desire to improve knowledge in their surrounding environment (Lee & Ma, 2012; Thompson et al., 2020). These motivations might be translatable to our respondents as well: Our participants directly referred to wanting to raise awareness among others – presumably, people who do not subscribe to participants' values openly and whom participants feel should be informed or educated about the topic. This also links to the second notion, which participants did not directly voice, though could be inferred from the context, namely a feeling of moral – and in some cases intellectual - superiority. Most participants frequently and actively pointed out their pro-environmental behavior to the point where one participant refers to themselves and their behavior as "a good example". Furthermore, some participants referred to other citizens as ignorant or unknowing, or flat-out science deniers. These needs for gratification could offer one explanation for why our participants participated in information sharing, even though they, knowingly, do not reach a wide audience with their actions.

These findings might also be connected to concepts of *environmental moral exporting*, referring to people's motivation to persuade others to embrace their moral values concerning the environment and *environmental belief superiority*, reflecting people's conviction that their own view concerning the environment is more correct than other views

(Maki & Raimi, 2017). Both concepts are reflected in the answers our participants gave. Furthermore, they hold a connection to the concept of *social vigilantism*, describing an enduring individual difference that is characterized by the belief that the person's own belief is superior to that of others and an effort to correct other more "ignorant" views (Saucier & Webster, 2010). This concept, also related to extreme opinion expression, has been studied in an environmental context as well (O'Dea et al., 2018), the domain investigated in our study. With the elaboration on social media activity we provided, our results indicate that the concept of environmental social vigilantism could translate to social media behavior as well.

Lastly, next to wanting to inform others, some participants also mentioned that they use social media to inform themselves. This has become increasingly common in general: Social media users increasingly rely on the platforms to inform themselves on political matters and follow the news (Kligler-Vilenchik et al., 2020), something also reflected in our sample.

Expressing Opinions, Emotions and Support

Participants also used social media channels to express their emotions and opinions and show support for organizations or sometimes individuals that they believed in, which included environmental organizations such as Greenpeace or Milieudefensie. Indeed, much literature has explored the importance of emotions in connection to social media, ranging from studies about the positive or negative affect of social media to more detailed concepts such as contagion (for a review consider Hyvärinen & Beck, 2018). If emotion is defined as an experience of affect specific to an event or cause (Hyvärinen & Beck, 2018) then our respondents mainly expressed two emotions: anger and fear. Anger was projected onto the government, the farmers, and other people. Fear, however, was related to the future in general and was voiced through worry about the survival of future generations, including participants' children, as well as humanity as a whole.

Prior research also found differences in emotional drives when sharing political content dependent on people's ideological extremism (Weissmueller et al., 2022). Generally, the researchers found that emotions trump argument quality when sharing behavior of

political content is concerned and that content is more likely to be shared by users in the ideological center when it includes positive emotions rather than negative emotions. However, this relationship turns when people are ideologically extreme. Regarding our participants, their perceptions of fear and anger, which can be categorized as negative emotions, might indeed be drivers of their online behavior, such as their sharing behavior. However, our participants' fear did not relate to imminent danger with immediate consequences, such as natural disasters, during which other research investigated online sharing behavior. (Li et al., 2020). Instead, our results indicate that fear of the future state of the earth in general, characterized in our sample by expressions of worry about future generations and the survival of humanity, drives participants' actions. Additionally, this fear might be amplified by the sense of urgency that participants experience, which could indicate that participants perceive the threat of climate change as an imminent danger as well.

Participants also stated that they use sharing behavior (e.g. retweeting, sharing posts by others) as a form of expressing their support, which prior is identified in prior research as well (Blight et al., 2015; Hayes et al., 2016), though our respondents mainly directly expressed supporting organizations (e.g. Greenpeace, Milieudefensie, Extinction Rebellion). For some of our participants, this support also translated to offline behavior, in that they also joined demonstrations by the organizations they support online (e.g. Klimaatmars). Our research could therefore give implications about the role of emotions in supporting actions of people who express themselves in an extreme manner. Especially fear of the future together with a sense of urgency, possibly in combination with anger, might lead to people expressing themselves extremely online.

A Sense of Urgency, Frustration with the Government

A strong concern voiced by all participants was the current state of the Netherlands (and the earth in general), accompanied by a strong sense of urgency. This sense of urgency is also reflected in other research about climate activism (Corry & Reiner, 2021) and could be interpreted as one of the main drivers for our participants, as it was mentioned frequently and

across all interviews, with one participant specifically noting that they did not use to take action but feel like they *have to* do so now.

Further, our participants, though all supportive of climate policy, expressed negative views about the current Dutch government or the government system as a whole. However, only one participant hoped to directly influence the government with their social media actions, while others resorted to directing their action at supporting organizations that criticize the government or contacting local government officials. Participants also frequently mentioned what they thought the government should do or how it should be structured. Participants' opinions of the government might be connected with their sense of urgency and fear of the future, in that they do not perceive that the government is doing enough to counteract climate change or is corrupt, which indicates a lack of trust in governmental institutions. Our results might therefore indicate that a fear of the future, together with a sense of urgency and low trust in the government might be drivers of people expressing themselves in an extreme manner.

The Farmers

Four of six participants talked about "the farmers" in the Netherlands and painted them as an opposing outgroup. This was unsurprising for multiple reasons: Not only do protests by the Dutch farmers receive a lot of media attention, they also are typically associated with political parties with contrasting views to those our participants stated – in this particular case concerning climate policies (e.g. Forum voor Democratie, 2022). This form of outgroup prejudice, which is part of the social identity approach, has been shown to be a common attitude, with many studies focusing on the political environment in the US, and has been associated with polarization (Amira et al., 2021; Iyengar & Westwood, 2015). While none of our participants specifically targeted their actions towards farmers, it nonetheless, was a common theme.

Theoretical and Practical Implications

The results of our study showed, that while all participants we sampled for our interviews had extreme scores on the survey, some of their opinions about the topic were

more nuanced. We were also interested in what motivated them to express themselves.

While participants named reasons that are commonly also found in social media literature in

general, such as information provision (Holton et al., 2014; Thompson et al., 2020),

information seeking (Kligler-Vilenchik et al., 2020) or social support (Blight et al., 2015;

Hayes et al., 2016) they also showed intentions to influence others' actions by providing this

information. Future research could apply the study of moral exporting, belief superiority

(O'Dea et al., 2018), and social vigilance (Saucier & Webster, 2010) to the social media

context and investigate in what way the extremity of expressions is connected to this

intention to influence. Additionally, this intention could also be investigated together with

other prominent themes featured in our study, such as negative attitudes towards the

government or a sense of urgency. These could be related to participants experiencing the

feeling of having to take matters into their own hands due to a lack of governmental action

despite the urgency of a situation.

Furthermore, the influence of this sense of urgency about an issue on extreme

expressions on social media has not been explored much and should be investigated in

more depth. In our sample the strong sense of urgency could be seen as legitimizing

extreme actions for participants, in order to prevent a future they fear. This was visible in

statements that completely disregarded the importance of other issues framing climate

change as "issue number one". Specifically, the combination of urgency and fear of the future

driving extreme expressions online might yield new insights, with the topic of climate change

offering a promising context to study this effect. Moreover, the relationship between

perceived urgency and the intention to influence others with information should be

investigated more closely, as these two themes were prominent in our study and might

explain the educational role our participants appear to take. In this context, participants'

perception of their own knowledge and the knowledge of others about the topic might also

provide insightful discoveries, as participants appeared to assume that others do not know

about the issue. Given that a majority of people in Europe do believe anthropogenic climate

change is happening and that it is a threat (Hawkins & Kimaram, 2022; Poortinga et al.,

2018), it would also be interesting to confront participants expressing this need to educate others about climate change with this statistic.

Additionally, a form of outgroup prejudice against farmers in the Netherlands was observed in our sample. While prior research already concerned itself with this topic in general, these two groups would offer an opportunity to investigate the topic in a European setting with a focus on climate policy making. Finally, we found that even though participants expressed themselves extremely on our survey, most of them were open to conversation and had many ideas as to how the current system might be improved.

Limitations

Our study was not without limitations, perhaps the most obvious of which being our sample. Firstly, we sampled our participants through the Twitter page of the environmental organization Milieudefensie, which limited our sample collection to people that follow their account. This might have been what led to our sample on the survey being overwhelmingly pro-climate policy. Through this we were unable to provide a balanced view on the polarization aspect of the topic, though we were able to still gain valuable insights in people who expressed extreme opinions. Future research should seek to widen their network of approaching people, perhaps collaborating with various big organizations to sample a wide variety of people. Additionally, our respondents' mean age was 61.67 years, whereas the mean age in the Netherlands is 42.4 years (Statistics, 2022). This might have been brought about by our study not offering compensation and the time intensive nature of our research. Indeed, when we were inviting participants for interviews, we received multiple responses of people who indicated they did not have the time. Lastly, we created a lot of the study material ourselves (i.e. the survey questions) and also decided on the inclusion criteria for interviews. While our interviewees' answers on the survey represented their general attitude from the interviews, validating the items beforehand could lead to a clearer selection of participants.

Conclusion

The present study investigated what motivates people to express themselves extremely. We found that people who expressed themselves extremely on our survey did not

necessarily do so during the interviews we conducted. The main motivations our respondents stated for expressing themselves online were the intention to influence others through providing information, using social media to express their emotions and support others, and informing themselves. All participants also expressed a strong sense of urgency, which might be related to their intentions to influence others, their negative attitudes towards the government and their need to express themselves about the topic of climate change. Lastly, most participants clearly distinguished "the farmers" as an outgroup, which might be related to the media attention and associated political affiliations connected to Dutch farmers. Our findings relate to various literature related to social media or polarization but could uniquely contribute a detailed view of motives behind extreme expressions in the debate around climate policy and the economy. Future research should investigate the role of urgency plays in extreme expressions online as well as how a strong wish to influence others is related to extreme expressions.

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Appendix A

Tweets featuring Prompts by Milieudefensie

Milieudefensie ✔ @milieudefensie · Jun 24 · · ·

Het #klimaat kan heftige emoties oproepen. Heb jij dat ook? En laat jij die op #Twitter horen? Zou jij dan mee willen doen aan een #onderzoek van de Universiteit van Groningen Klik op de link en lees meer 👇 bit.ly/3zO4NNt

💬   🔁 5   ♡ 6   ↑

Milieudefensie ✔ @milieudefensie · Jun 25 · · ·

Het beperken van de opwarming tot 2 graden is volgens wetenschappers al (bijna) niet meer mogelijk. Wat doet dat met jou? Laat jij je op #Twitter luid en duidelijk horen? Zou jij dan mee willen doen aan een onderzoek van de Universiteit van Groningen 👇 bit.ly/3zO4NNt

💬 2   🔁 8   ♡ 12   ↑

Milieudefensie ✔ @milieudefensie · Jun 26 · · ·

Gaat de politiek volgens jou niet ver genoeg met het #klimaatbeleid, of juist
te ver? En laat jij dat ook luid en duidelijk horen op #Twitter? Zou jij dan
mee willen doen aan een #onderzoek van de Universiteit van Groningen?
Klik op de link & lees meer 👇bit.ly/3zO4NNt

💬   ⟲ 3   ♡ 3   ⬆

Milieudefensie ✔ @milieudefensie · Jul 1 · · ·

😤 Het #klimaat kan heftige emoties oproepen. Heb jij dat ook? En laat jij
die op #Twitter horen? Zou jij dan mee willen doen aan een onderzoek van
de Universiteit van Groningen? Klik op de link en lees meer 👇
bit.ly/3zO4NNt

💬   ⟲ 5   ♡ 5   ⬆

Appendix B

Structured interview Guide

Er is veel te doen over het klimaatbeleid en de gevolgen ervan voor de economie. Na het klimaatakkoord van Parijs heeft de Nederlandse regering een klimaatplan opgesteld om klimaatverandering tegen te gaan. Voor de huidige regering is het milieubeleid een topprioriteit. Er is ondertussen een voortdurende discussie over de impact die dit klimaatbeleid zal hebben op de economie. U beantwoordde daar in de vragenlijst al wat vragen over. Vandaag willen we hier graag met u over doorpraten.

- Om te beginnen de vraag: Wat vind u eigenlijk van deze discussie? Waar staat u zelf als het om klimaatbeleid en de economie gaat?

  [Hier ruimte voor direct antwoord respondent]

  - Eventuele vervolgvragen, bij gebrek aan (gedetailleerd) antwoord:

    A.   Waarom vindt u dat?

    B.   Zou de overheid iets moeten veranderen aan hoe ze met klimaatbeleid omgaat? Wat is het belangrijkste?

    C.   Los van uw oordeel over het beleid zoals dat nu bestaat, vindt u dat de overheid dit beleid goed uitvoert? [Dit kan vooral voor mensen die het met het beleid eens zijn een goed opvolgvraag zijn]

- Andere mensen doen ook … (zie hieronder; wat nog niet is besproken). U ook?

    A.   Online reacties over klimaatbeleid (Twitter, websites met filmpjes etc.)

    i.   Welk medium of welke media?

ii. Liken, delen met specifieke vrienden, delen op eigen tijdlijn, reageren, zelf posts schrijven?

iii. Wat wilt u hiermee bereiken?

iv. Wie is uw doelgroep?

v. Waarom deze doelgroep?

vi. Voor wie wilt u dit bereiken? (zelf, solidariteit met bewoners, milieu, etc)

vii. Heeft dit ook een relatie met uw offline actiegedrag? (ondersteunend, aanvullend/complementair, vervangend etc).

viii. Indien u online actief bent: Wat is uw drijfveer om online actief te zijn m.b.t. het klimaatbeleid? Hoe verhoudt dat zich tot uw drijfveer om offline actief te zijn (indien dit het geval is)?

- Wat hoopt/wenst u voor de toekomst?

Appendix C

Participant Characteristics

Table A1

Sociodemographic Characteristics of Participants

Participant	Gender	Age	Nationality
P1	Male	69	Dutch
P2	Male	62	Dutch
P3	Male	72	Dutch
P4	Male	69	Dutch
P5	Female	48	Dutch
P6	Female	50	American

Appendix D

Translation of Quotes Used

Table B1

Original Quotes and Translation used, sorted by Participant Number

Participant	Original Quote	Translation
P1	Nou kijk, economie is niet van belang. Het gaat om het fatsoenlijk overleven op deze aarde, dat moet topprioriteit hebben voor ons en de mensen na ons.	Well look, the economy doesn't matter. It is about decent survival on this earth, that must be a top priority for us and the people after us
P1	Kijk over en jaar of 10 ben ik hier niet meer. maar mijn kinderen, ik heb nog jongere kinderen, die moeten het straks maar doen. Ik heb ook kleinkinderen. Voor hun moet er ook nog een mooie wereld over zijn. En daar knok ik voor.	Look in 10 years or so I won't be here anymore. but my children, I have younger children, they will have to deal with it later. I also have grandchildren. There must also be a beautiful world left for them. And I fight for that.
P1	[…] Maar er komt een tijd dat dat niet meer gaat, als de meerderheid weigert om te blijven veranderen, dan gaan we met zijn allen ten onder."	[…] But there will come a time when that will no longer be possible, if the majority refuses to keep changing, we will all perish."
P1	Ik probeer mensen te laten zien dat veranderen wel kan, en dat je van veranderen niet bang hoeft te zijn. Dat daar hele mooie voorbeelden van zijn, en dat het ook heel urgent is. Dus zowel op het ene vlak als het andere vlak draag ik dezelfde boodschap uit.	I try to show people that change is possible, and that you don't have to be afraid of change. That there are very good examples of this, and that it is also very urgent. So, I am sending the same message on one

Het is urgent, het is urgent, het is urgent.

level as well as the other. It's urgent, it's urgent, it's urgent.

P1 […] de hele liberale regering die we de afgelopen jaren kennen, die geeft veel te veel ruimte aan belangengroeperingen, waardoor er alleen nog maar discussies zijn tussen groeperingen. In plaats van dat er een duidelijke lijn is."

"[…] the whole liberal government that we've known in recent years gives way too much space to interest groups lso that only discussions arise between groups. Instead of there being a clear line.

P1 Dus andere mensen proberen te beïnvloeden dat ze ook als consument een bepaalde macht hebben.

Trying to influence other people so that they [also know that they] have a certain power as consumers.

P1 [..]heel veel mensen zijn niet geïnteresseerd in de feiten[…]

"[…] a lot of people are not interested in the facts […]

P1 Mensen willen toch alleen maar dingen horen die bij hun standpunt passen.

After all, people only want to hear things that fit their point of view.

P1 Nou, kijk, het valt me op dat als ik naar mezelf kijk dat ik de laatste tijd minder actief aan het worden ben. Er wordt zo verschrikkelijk veel getweet en geschreven, dat je ook denkt, de chaos wordt alleen maar groter met ieder bericht wat de wereld in wordt geslingerd. Het doel wat mij voor ogen staan – duidelijkheid - soms vraag ik me wel eens af bereik ik dat nog wel

Well, look, I notice when looking at myself that I've been less active lately. There is so much tweeting and writing that you also think, the chaos only gets bigger with every message that is thrown into the world. The goal I have in mind – clarity - sometimes I wonder if I can still achieve that by giving my opinion. But I can't help it either.

door mijn mening te geven. Maar ik kan het ook niet laten hoor.

P1	Zelf probeer ik daar het goede voorbeeld in te geven. Wij leven duurzaam, sober, zuinig. We hebben zonnepanelen, huis geïsoleerd, elektrische auto, we kopen lokaal en biologisch, ik ben vegetarisch, er komt geen stukje vlees door mijn strot, dat is onverantwoord in deze tijd.	I try to set a good example myself. We live sustainably, frugally, economically. We have solar panels, insulated house, electric car, we buy local and organic, I am vegetarian, not a single piece of meat comes down my throat, that is irresponsible in these times.
P1	En daar probeer ik op mijn manier een steentje aan bij te dragen, en ook over te praten met andere mensen, liever niet te discussiëren, want meestal verhardt dat de standpunten alleen maar, maar wel met ze te praten, en ik probeer ze te verleiden door anders naar dingen te kijken en er anders over na te denken.	[…] I try to contribute […] in my own way, and also talk about it with other people, rather not to discuss it, because usually that just solidifies the points of view, but to talk to them, and I try to tempt them through looking at things differently and thinking about them differently.
P2	Ik bedoel […] ja mensen zijn kennelijk heel erg bang om te veranderen, terwijl uh er eigenlijk heel veel voordelen aan zitten om inderdaad de transitie in te gaan.	I mean […] yes people are apparently very afraid of change, while there are actually a lot of advantages to indeed go into the transition
P2	Je moet zeg maar, een premier moet hier gewoon gaan staan en moet zeggen jongens we hebben een probleem en daar moeten we een	You have to, say, a prime minister should just stand here and say guys we have a problem and we have to

	oplossing voor bedenken, het is allemaal ja, er gebeurt gewoon heel weinig eigenlijk.	come up with a solution for it, it's all yes, very little actually happens.
P2	Ja, twitter is natuurlijk ook een babbelbox, een voorbeeld stond vorige week ook in de krant van dat een boer zei ja ik zie op facebook en twitter alleen maar positieve reacties en dan denk ik van ja dat is jouw bubbel, eigenlijk zie ik alleen maar negatieve reacties.	Twitter is of course also a chat box - an example of this was also last week's newspaper of a farmer saying yes, I only see positive reactions on Facebook and Twitter and then I think yes, that is your bubble, actually, I only see but negative reactions.
P2	[…] het is allemaal heel erg onduidelijk voor mensen om actie te kunnen ondernemen […]	It is all very unclear for people how to be able to take action.
P2	"Nou ja, ik moet zeggen dat ik er eerlijk gezegd zo weinig mogelijk mee bezig ben, omdat het ja, het beïnvloed zeg maar mijn levensplezier op een negatieve manier.	Well, I have to say that I'm honestly busy with [social media] as little possible, because, well, it affects my enjoyment of life in a negative way
P3	Dus ik denk en ik vind dat de Nederlandse regering totaal gefaald heeft, en ik zou eigenlijk willen dat ze al die farizeeërs gewoon weg/verdwijnen, en dat er zoals dat er in Italië wel eens is voorgesteld er een aantal technocraten wordt aangesteld die alle problemen in rap tempo en echt gaan oplossen.	So I believe and I think that the Dutch government has completely failed and I would really like all those Pharisees to just disappear and that, like it was suggested in Italy, a number of technocrats are hired, who will solve all problems quickly and really do solve them.

P3	Ik zou dus eigenlijk willen dat de Nederlandse regering het klimaatprobleem centraal stelt, en daarop de economie aanpast. "Ik bedoel dat de boeren hun gang mogen gaan, en die hadden keihard aangepakt moeten worden […] kijk, de Nederlandse regering die pakt die klimaat activisten keihard aan, die worden gearresteerd, gaan een poosje de cel in, die krijgen een strafblad. Maar die boeren komen overal mee weg […]	I would actually like the Dutch government to focus on the climate problem and adjust the economy accordingly. I mean that the farmers are allowed to do their own thing, and they should have been dealt with harshly. […] the Dutch government handles those climate activists harshly, they are arrested, go to jail for a while, they get a criminal record. But those farmers get away with everything […]
P3	[…] want de burgers maken zich nergens druk om, omdat ze ook onwetend zijn.	[…] citizens do not worry about anything because they are also ignorant.
P3	Ik zou dus eigenlijk willen dat de Nederlandse regering het klimaatprobleem centraal stelt, en daarop de economie aanpast. Want het klimaatprobleem is probleem 1 in deze wereld en dat wordt overal ontkent.	I would actually like the Dutch government to focus on the climate problem and adjust the economy accordingly. Because the climate problem is problem number one in this world, and that's denied everywhere
P3	Ik heb maar 48 volgers, maar ik link dan ook Milieudefensie. Daar wil ik in ieder geval mijn mening uiten, en dan zie ik wel of daar reacties op komen.	I only have 48 followers, but I also link Milieudefensie. In any case, I want to express my opinion, and then I'll see if there are reactions to

Er komen nauwelijks reacties, maar dat is dan maar zo.

it. There are hardly any responses, but that's the way it is.

P3   ik probeer het een beetje als mijn eigen bibliotheek te zien. Daar kijk ik dan af en toe naar."

I try to see [the tweets I save] a bit like my personal library. I look at it every now and then.

P4   […] want er moet veel gebeuren willen wij deze aarde **redden**..

[…] because a lot has to happen if we want to save this earth.

P4   ja en mijn mening is altijd diegene die de wijze van dat er met spoed iets moet gebeuren om deze wereld leefbaar te houden.

Yes and my opinion is always the one that is the way that something has to be done urgently to keep this world livable.

P4   Ik geef even een voorbeeld, ik ben zelf een geboren boerenzoon. Ik zit laatst op een verjaardag waar ook een paar boeren zitten. Ik ging de discussie aan over stikstof in dit geval, en uhm, dat werd me door enkele mensen zeer kwalijk genomen. Nou, ik duw toch door, omdat ik zeg van nou je kan er alleen maar een mening over hebben als je ook scheikundige bent want dan weet je wat er met die stikfstof in de natuur gebeurt, maar uhm, de meeste boeren die kunnen alleen maar de woorden gebruiken: ze zijn gek in den haag, ze zijn gek in den haag, dat is natuurlijk geen argument, wat mij betreft.

Let me give you an example, I am a born farmer's son myself. I was recently at a birthday party where a few farmers were also present. I got into a discussion about nitrogen, in this case, and some people blamed me for that. Well, I'll push on anyways, because I say, well, you can only have an opinion about it if you're also a chemist, because then you know what happens to that nitrogen in nature, but most farmers can only use the words: they are mad in The Hague, they are mad in The Hague - that is of course not an argument, as far as I am concerned.

P4	Daar wil ik mee bereiken dat mensen erover nadenken. […] het gaat mij erom dat mensen er over nadenken zo veel mogelijk, wat ik ook net al zei, ik probeer daar waar mogelijk een klein duwtje te geven."	I want to get people to think about it. […] it is important to me that people think about it as much as possible, as I just said, I try to give a little push where possible.
P4	[…] we hebben te maken met een enorme hoeveelheid mensen, die zogenaamd wetenschap ontkenners ook zijn.	[…] we are dealing with a huge amount of people who are so-called science deniers.
P4	Kijk, wij moeten in deze wereld toe naar een zogenaamde stationaire, circulaire economie. En dat betekent dat dus groei een woord is wat is eigenlijk moet worden uitgebannen.[…] want groei betekent meer economische activiteit, en elke economische activiteit die we op dit moment nog veelal met fossiel qua energie aanpakken, is dus schadelijk voor het klimaat.	We must move towards a so-called stationary, circular economy in this world. And that means that growth is a word that really should be banned. […] because growth means more economic activity, and every economic activity that we currently still tackle with fossil energy is harmful to the climate.
P4	Nouja, het zijn ook dingen die ik heb gehoord van mensen die een bepaalde bekendheid hebben in deze wereld.[..] En niet dat ik ze na aap, maar ik ben dezelfde mening toegedaan. Dat er gebeuren moeten	Well, it's also things I've heard from people who have a certain reputation in this world.[…] And it's not like I'm imitating them, but I'm of the same opinion. That things must happen because it is already getting too late.

gebeuren omdat het kwart over twaalf is.

P4	De mensen die mijn tweet lezen die zullen uiteraard even nadenken hee wat bedoelt hij, en als ze dan goed doordenken, dan beseffen ze dat ik het belangrijk vind dat er aandacht is voor het milieu. […] Dus het is om de mensen zo veel mogelijk tot nadenken te zetten."	The people who read my tweet will of course think about what it means, and if they think through it carefully, they will realize that I think it is important that attention is paid to the environment […]. So it's to make people think as much as possible.
P4	[…] kijk ik heb er weinig reacties op gehad, ik geloof drie of vier, zo groot is mijn volgersgroep ook niet, maar ja het gaat mij erom dat mensen er over nadenken zo veel mogelijk […]	[..] look I have had few reactions on it, I believe three or four, my group of followers is not that big either, but, well, it is important to me that people think about it as much as possible[…].
P4	Nou, online actief om een ieder er toch maar even aan te herinneren van joh denk er over na, want er moet veel gebeuren willen wij deze aarde redden.	[I am] active online to remind everyone of it [the climate crisis], think about it, because a lot has to happen if we want to save this earth.
P4	Ik ben een twitteraar, maar meer een lezer dan een poster. Maar dan ga ik even terug naar vorige week, daar zat in een discussieprogramma zat Gert Jan Oplaat, een VVD-politicus. Maar hij maakte daar bekend dat hij aan de hand van de stikstof discussie het op	I am a twitterer, but more of a reader than a poster. But then I go back to last week, there was Gert Jan Oplaat, a VVD politician, in a discussion program. But he announced there that, based on the nitrogen discussion, he thought it

dit moment een reden vond op zijn VVD-lidmaatschap op te zeggen, en hij wist nog niet naar welke club hij nu naar toe zal gaan. En wat twitter ik dan, dat de heer Oplaat verlaat de VVD, omdat het vernietigen van de aarde hem niet snel genoeg gaat. Dat was even mijn uiting

was a reason to cancel his VVD membership at the moment, and he did not yet know which club he will go to now. And what do I tweet then: that Mr. Oplaat is leaving the VVD because destroying the earth is not happening fast enough for him. That was my expression.

P4	Ga ik daarin mee, ik twijfel nog, durf ik nog niet te zeggen. Maar het is wel iets wat door mijn hoofd door gaat, dat ik denk zal ik er in mee lopen, want elk steentje die ik kan bijdragen is mooi meegenomen	I'm still doubting whether I will take part in that, I cannot say yet. But it is something that goes through my head, thinking I'll take part, because every bit that I can contribute is a nice bonus.
P5	Nou, onder andere zorgen dat de **aarde blijft bestaan**. Voor mijn kinderen en kleinkinderen maar ook voor onszelf voorzie ik dat het heel snel gaat en we er wel last van krijgen.	
P5	Iedereen een basisbudget geven aan energiebelasting wat je mag doen, en alles wat meer is kost dan heel veel.	Giving everyone a basic budget for energy tax that you are allowed to use, and anything that is extra costs a lot.
P5	[…] andere mensen ook over te halen wat ze zelf kunnen doen aan klimaatverandering tegen gaan.	[…] convince other people that they themselves can do something to combat climate change.

P5	Nou, ik denk dat klimaatverandering en milieuschade in allerlei opzichten zo'n prioriteit is, dat het voor de economie gaat.	I think climate change and environmental destruction in all sorts of ways is such a priority, it ranks above the economy.
P5	[…] toch proberen uit te dragen om mensen die zo veel van de aarden verbruiken of gebruiken of verspillen, om die ook meer bewust te maken van dat we niet nog een aard hebben en echt zuinig moeten zijn, en we dat nu moeten doen.	[…] trying to challenge people who consume or use or waste a lot of this earth, to make them more aware that we do not have another earth and that we have to be frugal, and that we have to do that now.
P5	Normaal gesproken volg ik vele nieuws en opinie, maar nu denk ik dat ik ook zelf actie moet gaan ondernemen, ja.	Normally I follow a lot of news and opinion, but now I think I have to take action myself, yes.
P6	Dit gaat om een existentiële **crisis**.	It's about an existential crisis.
P6	Tegen de tijd dat mijn **kinderen** mijn leeftijd hebben bereikt, zitten we hier onder 3 meter water, waar ik nu zit.	By the time my kids reach my age, we'll be under 10 feet of water here, where I'm sitting now.
P6	Dat is een **kunst** dat je kunt leren, we kunnen mensen omscholen.	That is a form of art that you can learn, we can retrain people
P6	Ik moet mijn kinderen heelhuids door hun volwassenheid heen jassen, dat is een beetje moeilijk.	I have to get my kids through adulthood in one piece, which is a bit difficult.
P6	We kunnen bijvoorbeeld reclame verbieden over gokken en roken, want dat is slecht voor je gezondheid. Nou, laten we op dezelfde voet met is het	For example, we can ban advertising about gambling and smoking, because that is bad for your health. Well, let's be on the same page with

duurzaam? Ja, dan mag je reclame maken, en zo niet dan mag het niet

"is it sustainable?" Yes? then you can advertise, and if not, you can't.

P6 We moeten economie anders bepalen en een andere definitie geven, het gaat niet om hoe veel geld de regering binnen haalt ofzo, het gaat erom is het duurzaam? Als het niet duurzaam is is het niet rendabel op den duur. Dan is het vandaag rendabel, en morgen heb je niks meer. Ja, dat is gewoon dom. Dus wij zitten gewoon heel veel te investeren in dingen waarvan wij weten: dit betekent dat we er over en paar jaar niks meer aan hebben. Is het niet duurzaam, dan mag je er eigenlijk niet in investeren.

We must assess the economy differently and give it a different definition, it's not about how much money the government gets or something. It's about 'Is it sustainable?'. If it is not sustainable, it is not profitable in the long run. Then it is profitable today, and tomorrow you will have nothing. Well, that's just stupid. So, we are simply investing a lot in things where we know: [..] in a few years it will no longer be of any use to us. If it is not sustainable, then you should not actually invest in it

P6 Ja, online is meer informeren van mensen, maar alleen maar als ik denk dat het een kansrijk gesprek is. Als het iemand is die alleen maar wilt spuien, laat ik het zitten. ik moet wel heel goed uit kijken hoe veel energie je erin steekt, het kan heel veel energie zuigen, en dat moet je niet doen.

Yes, online [action] is more about informing people, but only if I think it could be a promising conversation. If it's someone who just wants to vent, I'll leave it be. I have to be very careful how much energy I put into it, it can suck a lot of energy, and you shouldn't do that.

Appendix E

Overview of Codes and Themes

Table E1

Summary of Codes

		n of participants contributing	n of quotes contributing	Example quote	Original quote
	Too Late	1	1	And yes, a few nuclear power stations - we may benefit from that in 15 years, but then yes, then you are already so much further, uh, yes, it is all too late, too little, too late, that was it. (P2)	En ja, een paar kerncentrales erbij, daar hebben we over 15 jaar misschien profijt van, maar goed dan ja, dan ben je alweer zo veel verder, uh, ja, het is allemaal zo ja te laat, te weinig, te laat, dat was het. (P2)
	Crisis	2	2	This is an existential crisis. (P6)	Dit gaat om een existentiële crisis. (P6)
	Urgency	6	18	So, I am sending the same message on one level as well as the other. It's urgent, it's urgent, it's urgent. (P1)	Dus zowel op het ene vlak als het andere vlak draag ik dezelfde boodschap uit. Het is urgent, het is urgent, het is urgent. „ (P1)

Surviving	4	8	It is about decent survival on this earth, that must be a top priority for us and the people after us (P1)	Het gaat om het fatsoenlijk overleven op deze aarde, dat moet topprioriteit hebben voor ons en de mensen na ons. (P1)
Change	5	9	I try to show people that change is possible, and that you don't have to be afraid of change (P1)	Ik probeer mensen te laten zien dat veranderen wel kan, en dat je van veranderen niet bang hoeft te zijn. (P1)
Farmers	4	11	I mean that the farmers are allowed to do their own thing, and they should have been dealt with harshly. (P3)	Ik bedoel dat de boeren hun gang mogen gaan, en die hadden keihard aangepakt moeten worden
"other people"	5	27	Well, I want to feel disconnected with these people. (P3)	Nou ja, ik wil gevoel van losverbondenheid met deze mensen. (P3)
Science & Facts	2	4	And that's actually not a nice discovery at all, because a lot of people are not interested in the facts, there is much more	En dat is eigenlijk helemaal geen leuke ontdekking, want heel veel mensen zijn niet geïnteresseerd in de feiten, er wordt tegenwoordig veel meer opgehitst, links

			egging on these days, left and right, and I don't want to get involved in that. (P1)	en rechtsom, en daar wil ik niet aan mee doen. (P1)
People Need To Think/Be Informed	5	11	[I am] active online to remind everyone of it [the climate crisis], think about it, because a lot has to happen if we want to save this earth. (P4)	Nou, online actief om een ieder er toch maar even aan te herinneren van joh denk er over na, want er moet veel gebeuren willen wij deze aarde redden. (P4)
Convince Others	2	2	Trying to influence other people so that they [also know that they] have a certain power as consumers. (P1)	Dus andere mensen proberen te beïnvloeden dat ze ook als consument een bepaalde macht hebben. (P1)
Government (general)	4	23	So the government can do a lot of things to stimulate sustainability. (P6)	Dus de regering kan heel wat dingen doen om de duurzaamheid te stimuleren. (P6)
What Government Should Do	5	19	I would actually like the Dutch government to focus on the climate problem and adjust the economy accordingly. (P3)	Ik zou dus eigenlijk willen dat de Nederlandse regering het

				klimaatprobleem centraal stelt, en daarop de economie aanpast. (P3)
Contributing My Part	3	4	But it is something that goes through my head, thinking I'll take part, because every bit that I can contribute is a nice bonus. (P4)	Maar het is wel iets wat door mijn hoofd door gaat, dat ik denk zal ik er in mee lopen, want elk steentje die ik kan bijdragen is mooi meegenomen (P4)
Own Pro-Environmental Behavior	2	9	You can also stimulate other people by doing the right things. That's what I do, that's why I participate in this, and I try to spread that every day. (P1)	Je kunt zelf door de goede dingen te doen, ook andere mensen stimuleren. Dat is ook wat ik doe, daarom doe ik ook hieraan mee, dat probeer ik ook iedere dag weer uit te dragen." (P1)
Social Media Activity	6	31	So that, and besides that I'm a twitterer, and yes, once in a while I throw a big sneer there, so yes that way. (P4)	Dus dat, en daarnaast ben ik een twitteraar, en ja, een enkele keer doe ik daar ook wel eens een flinke sneer uitdelen, dus ja op die manier. (P4)

To Inform Myself	2	3	And I get that wisdom a bit from twitter, so I have to be a bit careful with that. (P3)	En ik haal die wijsheid dan een beetje van twitter, dus daar moet ik wel een beetje mee oppassen. (P3)
Support Others	4	5	And I do donate to environmental organizations, for example, so that sort of thing […]. (P5)	En ik doneer wel aan bijvoorbeeld milieuorganisaties, dus dat soort dingen ook.(P5)
Offline Action	6	26	Yes, for example, I am very active about nature reserves and specific topics such as roadside management, which is also a current fortunately. (P1)	Ja, ik ben bijvoorbeeld heel actief over natuurgebied over specifieke onderwerpen als bermbeheer, dat is ook actueel gelukkig. (P1)
Demonstrations	3	3	I've only just started with climate marches. (P3)	Ik ben nog maar pas begonnen met klimaatmarsen. (P3)
Contacting Government Officials	2	3	So I also write to the municipality about that, every time you tile a street, do it with water-permeable tiles, then you will be less bothered by those trees. (P6)	Dus daar schrijf ik de gemeente ook over, elke keer als je een straat betegelt, doe dat met waterdoorlatende tegels, dan heb je minder last van die bomen opdruk. (P6)

Community Projects	2	3	Yes, I am a member here in the area of "buurkracht". (P1)	Ja, ik ben hier in de omgeving lid van buurkracht. (P1)
Emotions (general)	4	6	"It's terrible that it's being discussed. (P1)	"Het is verschrikkelijk dat erover gediscussieerd wordt. (P1)
Depressing	1	2	"I don't follow the government on [social media] because I find it so depressing, what they all have to say. (P6)	"Ik volg de regering daar niet op, want ik vind dat zo deprimerend, wat ze allemaal te zeggen hebben. (P6)
Hope	2	3	So I also try to give hope, from look there it is possible. (P1)	Dus ik probeer ook wel hoop te geven, van kijk daar kan het wel. (P1)
Worry	3	4	So, I'm really worried about this. (P6)	Dus, ik maak me hier enorme zorgen over. (P6)
Anger	1	3	That makes me a little angry, to say the least. (P3)	Dat maakt mij een beetje boos, zachtjes uitgedrukt. (P3)
Children	3	10	I have to get my kids through adulthood in one piece, which is a bit difficult. (P6)	Ik moet mijn kinderen heelhuids door hun volwassenheid heen jassen, dat is een beetje moeilijk. (P6)

Voicing Ideas	5	13	For example, we can ban advertising about gambling and smoking, because that is bad for your health. Well, let's be on the same page with "is it sustainable?" Yes? then you can advertise, and if not, you can't. (P6)	We kunnen bijvoorbeeld reclame verbieden over gokken en roken, want dat is slecht voor je gezondheid. Nou, laten we op dezelfde voet met is het duurzaam? Ja, dan mag je reclame maken, en zo niet dan mag het niet (P6)
Money	4	7	But I also give money to charities such as greenpeace and Milieudefensie, and I also follow them on Twitter. (P6)	Maar ik geef ook geld aan goede doelen zoals greenpeace en milieudefensie, en ik volg ze ook op twitter. (P6)
Economy	6	11		
Listing Names	3	5	There isn't either, I mean, Rob Jetten might be a very nice man, but he doesn't make a dent , I think. (P2)	Er is ook niet, ik bedoel, Rob Jetten is misschien een hele aardige man, maar ja die slaat ook niet een deuk in een pakje boter volgens mij. (P2)
Listing Events	4	9	There is a huge drought in Italy, a glacier has broken off. In Delhi they drive by with tanks of water, and there people get a	Er is in Italië een enorme droogte, een gletsjer afgebroken. In Delhi rijden ze langs met tanks met water, en daar

bucket of water because there has been no more water available for a long time, it's just terrible. If you look at Africa, millions and millions of people are dying there because there's been no rain falls in big cities for 5 years. And then you have those idiots in the Amazon who are still cutting forests, in Australia that is also terrible. First a year of terrible fires, and already a lot of flooding. (P3)

krijgen mensen een emmertje water omdat er al lang geen water meer beschikbaar is, het is gewoon verschrikkelijk. Als je kijkt naar Afrika, daar sterven miljoenen en miljoenen mensen, omdat er al 5 jaar geen water valt in grote steden. En dan heb je die idioten in de amazone die nog steeds bos kappen, in Australië dat is ook verschrikkelijk. Eerst een jaar verschrikkelijke branden, en nu al een hele boel overstromingen. (P3)

| People Need To Speak With Each Other | 2 | 2 | So I hope people learn to listen, talk to each other, and develop a certain resilience, so when everything goes to shit, we can say okay that's that and now we move on. (P6) | Dus ik hoop dat mensen leren luisteren, met elkaar in gesprek gana, en bepaalde weerbaarheid leren ontwikkelen, dus wanneer alles in de |

shit vliegt, dat wij kunnen zeggen oke

dat is dat en nu gaan we veder. (P6)

Table E2

Summary of General Themes

General Themes	Codes corresponding to themes	Summary of Theme	*n of participants contributing*
Economy	Economy (general), deductive, Voicing Ideas	The Economy was one of our deductive codes and we specifically asked participants about it. Yet, many participants practically ignored the scope of the question. When probed, however, participants also started coming up with their own ideas. The economy was closely related to participants talking about the government, yet, the theme of government was more all-encompassing and we therefore did not group them together.	6
Concerns About The Status Quo	Too Late, Urgency, Crisis, Surviving, Change, Children	All participants voiced concerns about the state of the Netherlands or the earth in some form. This expressed itself through participants calling for change, referring to terms of survival of the earth and future generations, and the expression of extreme urgency regarding the issue of climate change.	6

Further, this also included worries participants voiced about their children.

Other People	Other people (general), Science & Facts, People Need To Think/Be Informed, Convince Others	Participants often made assumptions or statements about "people". This included some participants accusing others of being science deniers or not caring. Participants also mentioned in various ways that people have to start thinking about the environment and talked about wanting to convince "people"	6
Government	Government (general) What Government should do	The government was viewed negatively by all participants in various degrees, which prompted most participants to voice their ideas about what the government should be doing instead, opposed to what it was doing at the moment.	6
Social Media Activity	Social Media Activity (general), To Inform Myself, To Support Others (online), People Need To Think/Be Informed	When asking participants about their social media behaviors, they not only elaborated on where they were active but also on why. Next to using social media to inform themselves and support others (e.g. by retweeting), participants stated that they wanted to share information to influence "other people" and "get them to think".	6

Offline Activity	Demonstrations, Contacting government officials, Community projects, own pro-environmental behavior, support others (offline), money	We specifically asked participants if they were also active offline, which all participants indicated they were. However, they had different ways of interpreting "offline action" ranging from their own pro-environmental behavior, to supporting others with money	6
Emotions	Codes: Depressing, Hope, Worry, Anger, Emotion (Other)	Throughout the interviews, participants also expressed emotions, though the type of emotion varied between participants ranging from anger to feeling depressed. Emotional responses which did not name a specific emotion were coded as "other". Emotions were especially present when participants talked about the urgency of the situation, the government or their social media behavior.	5
Outgroup	Farmers	The farmers were a theme that kept reoccurring during interviews. They served as an outgroup participants compared	4

themselves to, for instance in terms of treatment by the

government.

Table E3

Participants' Contribution to Themes

Theme	P1	P2	P3	P4	P5	P6
Economy	x	x	x	x	x	x
Concerns About The Status Quo	x	x	x	x	x	x
Other People	x	x	x	x	x	x
Government	x	x	x	x	x	x
Social Media Activity	x	x	x	x	x	x
Offline Activity	x	x	x	x	x	x
Emotions	x	x	x		x	x
Outgroup	x	x	x	x		