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Climate Change Risk Perception & Policy Support

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Abstract

Climate change is one of the most serious issues currently affecting the global population. Most individuals acknowledge that the impacts we are likely to experience as a result of climate change can imply devastating consequences, however most people do not sufficiently engage in climate ameliorating behaviours to result in a carbon neutral footprint. The underlying reason for this inconsistency is that we all have barriers that are inhibiting our actions, such as psychological distance which is defined as a cognitive separation between a person and events that are not in their direct surroundings, which can occur on multiple dimensions. In order to examine this, the following research question was proposed: What are the effects of psychological distance on climate change risk perception and climate change policy support? This thesis investigated the relationship between psychological distance and climate change risk perception and policy support using the data from the 2016 research project European Perceptions of Climate Change (EPCC). Results showed that great psychological distance was generally related to less climate change worry, lower perceived severity of climate change impact, and less policy support. The only exception for this was Geographical psychological distance, which did not predict impact evaluation, suggesting that the perception of climate change impact severity is not evaluated differently for their own country in comparison to others. This lays grounds for claiming that there is a relationship between psychological distance and climate change perceptions. The present thesis emphasizes the importance of investigating how individual psychological distance can be reduced as one of the key strategies to ameliorate global climate change impacts from individuals.

Preface & Acknowledgement

The motivation for working on this project has its origin in my interest in the relationship between climate related issues and individual behaviours, as well as decision-making that might be guided by presence or absence of these issues in mind. Looking at topics relating to climate developments and underlying causal factors is especially important in our modern-day society, which elevates the importance and potential benefits that can be gained from investigating related issues and topics.

I would like to extend my thanks to my supervisor Gisela Böhm, for inviting me to work on such an interesting and important project for my thesis. I appreciate the continuous support and critical feedback throughout the process from start to finish, which has undoubtedly elevated the quality of the current thesis. I would also like to thank my co-supervisor Charles Ogunbode for providing further advice during my process of working on my thesis.

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1. Introduction

1.1 Climate changes

Anticipating the future under the impacts of climate change is one of the most important challenges in modern day society (McNutt, 2013). Psychological distance can be defined as a cognitive separation between oneself and other objects or events as they are typically not present in their direct surroundings (Liberman, Trope & Stephan, 2007). It is one of the most impactful barriers hindering individual climate change mitigation (Gifford, 2011). Our environment is changing drastically especially during the past century, which is documented by natural science investigations conducted as far back as in 1959 showing higher levels of greenhouse gases in the atmosphere (Urry, 2015). Observations of climate changes around the globe from a magnitude of recent studies have revealed that the average temperatures on land and at sea are consistently and gradually increasing, which suggests that climate change is anthropogenic (Kaufmann, Kauppi, Mann & Stock, 2011; Budyko & Izreal, 1991). It is crucial to further research and investigate the underlying causes of what makes us humans cause climate changes, as a strong link in between climate change and health has been found. The occurring climate changes is expected to increase risks of infectious, heat and air quality related diseases and fatalities (Ekong, 2016; Parkinson & Evengård, 2009). Psychological distance is an important aspect influencing the underlying drivers of individual behaviour as it is shown to show a strong connection to the extent of someone's preparedness to change their behaviours to ameliorate climate change (Spence, Poortinga & Pidgeon, 2011). Spence and colleagues found that psychologically distanced attitudes and mindsets, have been shown as deciding factors in many circumstances. For individual inaction or insufficient ameliorating action on climate change, climate change is perceived as distant on multiple dimensions. It can be beneficial to examine the impact of psychological distance on climate change perception to help improve our understanding behind individual inaction, to ultimately help benefit the progression of climate changes.

Climate change policy support has been a hot topic in recent years. Leaders of almost all nations around the world have ratified the 2015 Paris agreement aiming to limit global warming developments to below 2 degrees Celsius, compared to pre-industrial levels (United Nations Framework Convention on Climate Change, 2015). The primary cause of action that can significantly contribute to reaching this goal is to lower the sum of greenhouse gas

emissions. This especially requires that nations such as China and the United States, which have higher CO₂ emissions than any other countries to make substantial changes (Rogelj, 2016). This agreement has successfully engaged the vast majority of the nations of the world by inducing cognitive change and highlighted economic benefits to be gained from climate action, for the countries on domestic and international levels (Dimitrov, 2016). Thus, making the agreement crucial for combating and turning around climate changes.

The Intergovernmental Panel on Climate Change (IPCC) stated in 2007 that such climate change is unequivocally driven by human activities (Pachauri & Reisinger, 2008). Haines and Patz (2004) provided a global generalizable overview of climate change outcomes, as well as their severity and likelihood. This is important as it provides grounds to discredit the uncertainty to climate change which some individuals exhibit. Firstly, it is very likely to experience higher maximum temperatures, which is related to increased air pollution and forest fire occurrences. Higher minimum temperatures are also to be expected in a similar manner, in addition to more intense precipitation events. Further, increased droughts and floods are likely to occur, in addition to tropical cyclones, monsoons and storms. Haines and Patz subsequently elaborate upon the consequences of such outcomes. Populations in developing countries, especially those residing along the coastlines, are vulnerable to floods which poses risks of economic damage as well as physical injuries or fatalities. Higher temperatures and rising sea levels can also bring forth increased rates of infectious diseases. Food production troubles caused by droughts are likely to cause malnutrition especially in developing countries, which are most likely to be prevalent and severe in Africa. This lays a foundation for some aspects of geographical distance which some individuals are exhibiting, although this is exaggerated as environmental issues are prevalent and very likely to largely impact the western parts of the world too.

Mitigation of these climate changes refers first and foremost to reducing individual and collective greenhouse gas emissions, by means such as prioritizing renewable energy sources (e.g. solar, hydro and wind energy) rather than oil and natural gases. Haines and Patz (2004) conclude that it is crucial to improve public health infrastructure and promote policies to decrease dependence on fossil fuels, to achieve significant efforts to turn around the global climate changes we are experiencing. In order to turn around and ameliorate these climate changes it is crucial to encourage and promote both governmental policies, as well as guiding individual behaviours of the general public. Psychological aspects of how to successfully

achieve these changes are crucial to complement the contributions of economists and natural scientists.

1.2 Barriers for individual inaction

As the introductory part above has explained, most people are aware that climate change seriously impacts all of humanity, which is further supported by a magnitude of researchers and scientists. Although most people believe sustainability and climate change are great issues, most people immerse themselves in too high greenhouse gas emitting behaviours in comparison to their immersion in mitigating behaviour of equal or greater significance (Gifford, 2011). A popular approach in recent years has been to promote environmentally friendly lifestyles through various media and community campaigns, to encourage changes in consumption patterns. The effects show some potential although they have limitations (Hobson, 2001). Many individuals and organisations have taken actions to attempt improving these developments, including some who have taken many huge leaps, but humanity in aggregate still continues to produce levels of greenhouse gases which result in the continuation of climate change as we have experienced for decades (Change, Clair & Pachauri, 2006). Gifford follows by stating that climate-averse infrastructure is essential, but that psychological barriers additionally significantly impacts the issue as they delay and obstruct decision making that have potential in facilitating emission mitigation and sustainability.

Some people do not have structural or economical capacities to improve their climate footprint, as they for example cannot afford solar panels or if they live in a rural area without availability of sufficient public transport options. However, most people that are not heavily restricted by such structural barriers have resources available to adapt to more sustainable actions and resource use, but this is rarely found at levels sufficient to significantly mitigate climate change. This lays grounds for proposing questions seeking to find an answer to why individuals who are aware of the severity of climate change and are in a situation of which mitigation is possible, do not make significant adaptations for amelioration.

“The dragons of inaction” is a theory concerning barriers of individual climate inaction. Contents of the theory are shown in the overview at Table 1 taken from Gifford (2011),

summarizing brief explanations of the contents within the categories of specific manifestations. These will be explained and elaborated upon, to showcase their relevance to explaining hindrances for individual actions to ameliorate climate change.

Table 1: *Psychological barriers to climate change mitigation and adaptation*

General psychological barrier	Specific manifestation
Limited cognition	Ancient brain Ignorance Environmental numbness Uncertainty Judgemental discounting Optimism bias Perceived behavioral control/self-efficacy
Ideologies	Worldviews Suprahuman powers Technosalvation System justification
Comparisons with others	Social comparison Social norms and networks Perceived inequality
Sunk costs	Financial investment Behavioral momentum Conflicting values, goals and aspirations
Discredence	Mistrust Perceived program inadequacy Denial Reactance
Perceived risks	Functional Physical Financial Social Psychological Temporal
Limited behavior	Tokenism Rebound effect

Note: This is the full list of the of barriers inhibiting individual action. Some of the most relevant ones are highlighted below. Refer to Gifford (2011) for an extensive explanation of each manifestation.

Limited cognition. Individual's judgements and decision-making have shown to be less rational in situations of uncertainty (Tversky & Kahneman, 1974). Sub-optimal rationality within individual mindsets proposes challenging prerequisites that act as barriers for their likelihood of mitigating climate changes. Although the extent of which people living in various parts of the world experience the effects of climate change varies greatly, this manifestation is conflicting as individuals seem to identify climate changes worse in other locations in comparison to their own (Gifford et al., 2009).

Ideologies. The second dragon of inaction is ideological worldviews that tend to preclude pro-environmental attitudes and behaviour. *Worldviews*, such as capitalistic mindsets found in consumable oriented habits, are not well suitable to benefit climate changes. Climate change mitigation naturally requires making everyday life changes, which proposes the risk of disrupting the comfortable quality of life for some people.

Comparisons with key other people. The third manifestation deals with how individuals compare themselves with others. *Social comparison* and *social norms and networks* elaborate upon how we draw comparisons with those around us, which can influence our attitudes regarding what is the most sought-after course of action (Heath & Gifford, 2002).

Sunk costs and behavioural momentum. The fourth manifestation explains the impacts of psychological barriers of investing money, time and behaviour patterns. Some amendments to an individual's life in attempts to improve their impact on climate changes require *financial investment*. Barriers of *behavioural momentum* include habits that are influenced by public norms and structures (Hobson, 2003). Habits are very resistant against prolonged and consistent changes, and they often require a long time before they are properly ingrained into an individual's everyday life.

Discredence. Discredence (or distrust) occurs when individuals doubt or deny others' opinions on matters such as how they can best ameliorate climate changes, based on *mistrust* of governments/scientists, perceived climate ameliorating *program inadequacy* or *denial* of climate changes overall.

Perceived risk. Perceived risks emphasize the potential uncertainties related to changing behaviours. Individuals might implement climate ameliorating behaviours such as purchasing

an electrical vehicle. Such decisions are visible to those around us, which can followingly propose a *social risk* such as exclusion, and/or subsequent *psychological risks*.

Limited behaviour. The final manifestation unravels the underlying causes to explain why many individuals do at least a minimal contribution towards lowering climate changes, while most agree they could be doing even more. This insignificant contribution may hinder these individuals from providing greater outcomes as they may be content with what they have accomplished.

1.3 Psychological distance

This project focuses on the effects of psychological distance as a barrier to climate action. As highlighted using the seven dragons of inaction above, there are a wide variety of barriers that can hinder individuals from adapting their everyday lives and their behaviours to ameliorate climate change, even when they are aware of the severity of climate developments. It is therefore important to contextualise climate change as an issue closely related to psychology, as it is tightly related to behaviour and psychological perspectives such as psychological distance. The construal level theory can be used to look at the importance of psychological distance in the context of global warming, to help explain how it does not directly enhance individual willingness to act, but rather the underlying mechanisms behind decision-making (Brügger, Morton & Dessai 2016). The present thesis is targeting gaps in the literature, to supplement research such as the ones highlighted above. We can clarify causes of inaction, by adding investigation of individual perception on how we view climate change and support related policies. This issue is one of the most urgent problems we are facing both now and increasingly so in the future, to promote societal changes for significant contributions to help reach a solution. Spence and colleagues found that public perception of climate change appears distant on many different dimensions, diminishing the perceived urgency of the matter.

Spence and colleagues summarize psychological distance on climate change as consisting of four theorized distance dimensions: Temporal distance, Social distance, Geographical distance, and Uncertainty. Temporal distance is the distance between the person and the event, and their perception of how likely they think it is going to happen, as well as when they assume that we will experience these impacts. Social distance is about how social groups

(e.g. ethnicity or nationality) impact how climate change is perceived. Spence and colleagues found that British participants in their study responded that climate change was a bigger issue in non-western developing countries compared to the UK. Geographical distance is that people generally think that climate change impacts are more likely to occur other places than where they live, regardless of where this is. This effect was found both internationally and within various parts of the same countries. Furthermore, the severity of these impacts was estimated as more devastating in distant locations. Social and Geographical distances have a basis that is partly supported by research, as climate change has some implications of expected outcomes that are expected to be more severe in developing countries. This is especially true for several African countries, as the average temperatures are generally high, and many African countries have limited resources and capability to deal with these climate change consequences. However, these western perceptions are disproportionate. One cannot expect that climate change impacts will not be a serious issue in Europe or North America, even though certain developments might appear less severe compared to what is inevitable in areas closer to the equator. Uncertainty is the last theorized dimension of climate change, which deals with scepticism regarding what is knowable about climate change developments and outcomes in the future. There are many western people that claim climate changes are anthropogenic, although some scientific disagreements exist. Spence and colleagues' British participant sample found that 40% believe that the climate system is too complex and uncertain for scientists to make useful forecasts.

Psychological proximity to climate change is generally associated with elevated concern, as well as indicating stronger likeliness for willingness for behaviour adaptations. The underlying origins of psychological distance on climate change characterize distant attitudes of scepticism, whilst proximal distance has its underlying foundation in fear (Brügger, Dessai, Devine-Wright, Morton & Pidgeon, 2016). Brügger and colleagues acknowledge that although high psychological proximity to climate change predicts likelihood of enacting sustainable behaviours, it can be difficult to evoke. One procedure that Brügger and colleagues recommend which can be implemented to shorten an individual's psychological distance on climate change is using tailor made communication methods which promote lay citizen's likelihood of taking more impactful ameliorative actions. An example of this is using informational commercials designed to spark fearful responses to research-based predictions of likely outcomes of climate change developments.

The devastating outcomes climate changes propose to our global environment are undoubtedly urgent issues, which have support from natural science investigations and large organisations such as The Intergovernmental Panel on Climate Change. The primary ways of which humanity may ameliorate these developments include governmental policy changes and behaviours of individual citizens everyday life decision-making. The latter encounters various barriers that hold back people's adaptations, which proposes a risk of inaction although they are aware of the severity and urgency of climate change results. Use of communication methods to diminish psychological distance is identified as one of the most important courses of actions to improve people's likelihood of wilfully compromising habits in favour of climate benefits (Spence, Poortinga & Pidgeon, 2012).

1.4 Construal level theory

Although significant ameliorating climate changes focuses largely on governmental policies, it is important to not disregard benefits that can be gained from individual contributions (Hiller, 2011). The construal level theory is central for understanding the relationship of how an individual is affected by psychological distance, which depends on whether their experienced distance to climate change is abstract or concrete (Trope & Liberman, 2010). The way of which the construal level theory explains this relationship is that individuals with high psychological distance portray an abstract mind-set regarding climate change, whilst the mind-set of those with little psychological distance are more concrete. The former group represents a high construal level, whilst the latter represents a low construal level. Furthermore, the perspective of this theory helps understand conditions for approaching and understanding individual psychological distance, as lowering someone's distance does not impact their willingness to change, but rather the underlying mind-set that is driving their behaviours (Brügger, Morton & Dessai, 2016). This implies that it might be beneficial to incorporate interventions that portray climate change impact in a concrete and perhaps physically visible manner, to attempt lowering individuals' psychological distance and strengthen their willingness to combat climate change.

Researchers using the construal level theory when working on psychological distance acknowledge that there are some concerns with how the theory can be applied, in a way which makes consumers perform desirable behaviour (Liberman, Trope, Wakslak, 2007). Some potential issues up for debate are the multiple differences and similarities amongst the

dimension of psychological distance (e.g. social and geographical distance can both target the same groups of people). Further, these selections of distances set a basis for how individuals construct stimulus information sampling. Overall, there are some useful elements to be taken from the construal level theory, such as making impacts of climate change more visible or concrete. If successful, researchers might be able to target reducing the psychological distance of an individual and increase likelihood of behaviour adaptation, to reduce their climate footprint.

1.5 Aim and research question

The aim of the current project is to examine participant responses from the European Perceptions on Climate Change (EPCC) survey (Steentjes et al., 2017). In this thesis, the focus remains on selected questions relating to psychological distance to climate change risk perception and policy support. The EPCC aim was to investigate individual climate perceptions using international European samples. Germany, France, Norway, and the United Kingdom were chosen as the countries to take part in this study, among the most important energy producing countries in Europe. This lays grounds for them to showcase a basis of climate change ameliorating infrastructure and policies, which might guide other European nations to adapt their energy systems in a similar manner. The full report by Steentjes and colleagues will not be elaborated upon in the present thesis. However, some findings were not extensively reported on in the EPCC paper, which creates room for the present study to follow up, as their data on psychological distance can be further investigated, analysed, and discussed.

Large parts of research on climate change, especially less recently published papers, have predominantly been investigated through the perspective of economists and natural scientists (Urry, 2015). The aim of this paper is to expand upon this research approach by involving the perspective of psychology, similarly as an increasing number of articles from the past decades have done (e.g. Spence, Poortinga & Pidgeon, 2011; McDonald, Chai & Newell, 2015). It is crucial to reach a deeper understanding of the causes behind human actions and inactions, as a core problem of climate change could be rooted in human behaviour, guided by psychological aspects. Human behaviours are consciously or subconsciously guided by psychological aspects, which research shows how to guide by using theories such as the

construal level theory (Trope & Liberman, 2010). A theoretical highlight is the underlying reasons behind individual inaction, which consists of Temporal, Social, and geographical distance, as well as Uncertainty (Liberman, Trope, McCrea & Sherman, 2007). Liberman and colleagues suggest using the construal level theory when researching how each of these dimensions impact one another. Psychological distance might be manipulated to modify perceived distance and further promote environmental ameliorating behaviours. This is an example of a strategy to help us understand individual inaction or insufficiently ameliorating actions on climate change. The strategy assists analysts understanding why most people do not provide carbon neutral or carbon negative impact to collectively turn around the climate changes (Gifford, 2011). The current study further aims to provide a deeper insight into the relevance of psychological distance on climate change, which can help guide researchers, scientists, policy makers and lay citizen's behaviours. Improved understanding of the effects of psychological causes, consequences and solutions is identified as key in improving knowledge and understanding of the lack of climate change amelioration and can lay grounds for creating strategies of how to tackle the situation.

The current thesis will therefore investigate barriers hindering an individual's willingness to ameliorate climate changes, especially psychological distance. Literature on this issue has identified that one way this can be tackled is through implementing communication-method based strategies (Spence, Poortinga & Pidgeon, 2011; Gudykunst et al., 1996). Three core aspects taken from the EPCC questionnaire are highlighted to be used as key variables for the research aim of the current thesis: climate change risk perception is investigated using first a question measuring levels of worry, and second, a question measuring impact evaluation and perceived severity levels. Third, climate change policy support is investigated using a question where the respondents rated how strongly they supported their country being part of the 2015 Paris agreement.

In order to investigate this issue, the following research question is proposed: What are the effects of psychological distance on climate change risk perception and climate change policy support? Four dimensions of psychological distance (temporal, social and geographical psychological distance, and uncertainty) will be analysed to examine if they provide grounds for predicting levels of climate change worry, risk perception and policy support.

High levels of psychological distance in this context is found when individuals score higher on the four theorized dimensions of psychological distance, which occurs when individuals make statements as follows:

- Temporal distance: climate change will be felt in the distant future.
- Social distance: climate change is more likely to impact people that are not like themselves.
- Geographical distance: climate change is more likely to impact people that are in other countries.
- Uncertainty: the individual believes that there is a minority of scientists who agree that climate change is happening and that humans are largely causing it.

Psychological processes such as planning, perspective-taking and contemplating counterfactuals are examples of underlying factors behind the psychological distance dimensions (Lieberman & Trope, 2014). Temporal distance is closely related to planning. It is pivotal to engage in proper planning to coordinate and develop policies and guide behaviours to ameliorate climate changes, as temporal aspects guide the urgency of planning such implementations. Perspective-taking plays an important role in the dimensions of social distance and geographical distance, as these dimensions are impacted by an individual's ability to view climate change issues from someone else's point of view. Contemplating counterfactuals is related to the dimension of uncertainty, as there are some discussion regarding whether the factual statements that are confirming or denying climate change developments are correct or false. In order to fully investigate each component of the research question, there is proposed three hypotheses to showcase the expected findings.

1.6 Hypotheses

Hypothesis 1:

There is a relationship between psychological distance and climate change worry, whereby those with greater psychological distance are less worried about climate change.

Hypothesis 2:

There is a relationship between psychological distance and climate change impact evaluation, whereby those with greater psychological distance evaluate climate changes less severely.

Hypothesis 3:

There is a relationship between psychological distance and climate change policy support, whereby those with greater psychological distance are less supportive of climate change ameliorative policies.

Building on to all the three hypotheses above, one expects these relationships to be consolidated and can be predicted using the four theorized dimensions of psychological distance. Such results are predicted due to individual inaction barriers as elaborated upon above, which implies that those less with greater psychological distance are less likely to be mindful of and engaged with climate ameliorative behaviours (Spence, Poortinga & Pidgeon, 2011).

2. Research Methods

3.1 Participants and demographics

The following research methods was used to investigate important aspects of climate change perceptions:

This paper analyses data from the 2016 cross-country survey European Perceptions of Climate Change (EPCC) survey (Steentjes et al., 2017), which collected nationally representative samples in the U.K. (N = 1033), France (N = 1010), Germany (N = 1001), and Norway (N = 1004) (Steentjes et al., 2017). The total amount of valid responses across countries (originally N = 4048) was reduced after missing values were excluded, resulting in a sample size of N = 3455 to be used in the analyses. The participants of the EPCC study were surveyed using a questionnaire in their native language. The data collection was gathered simultaneously in France, Germany, Norway, and the U.K. between the 1st and 17th of June 2016, and the final report of the findings was published in March 2017.

The participants from France, Germany and the U.K were selected using quotas to make sure of variability with sufficient representation in various ages, genders, occupations, rurality, and region. All interviews of French, German and U.K participants were held using face-to-face omnibus style questionnaires, using Computer-Assisted Personal Interviewing in the comfort of their own home. Data collection in Norway used the official telephone register to recruit participants for the study. This data collection strategy was chosen for Norwegian participants as intensified face-to-face interviews are uncommon in Norway which could make it more challenging to provide honest and sincere answers. Further details on the participants and sampling methods can be found in the EPCC paper. The proportion of participants within each age group and for both genders across countries are shown in Table 2.

Table 2: *Socio-demographics from the EPCC survey*

	UK		France		Germany		Norway	
	n	%	n	%	n	%	n	%
Age								
15-24	161	15.6	135	13.4	105	10.5	165	16.4
25-34	130	12.6	161	15.9	125	12.5	153	15.2
35-44	140	13.6	163	16.1	154	15.4	174	17.3
45-54	159	15.4	176	17.4	225	22.5	170	16.9
55-64	169	16.4	160	15.8	157	15.7	133	13.2
65+	274	26.5	215	21.2	235	23.5	209	20.8
Gender								
Men	560	54.2	474	46.9	465	46.5	533	53.1
Women	473	45.8	536	52.1	536	53.5	471	46.9

Note: the content from table 2 is taken from the EPCC survey report (Steentjes et al., 2017).

Gender (1 = Men, 2 = Women) and age (1 = 15–24, 2 = 25–34, 3 = 35–44, 4 = 45–54, 5 = 55–64, 6 = 65+) were coded the same across the four countries, which were used in analysis as control variables. As seen in table 2, the distribution of men and women and participants within each age group are almost perfectly distributed with roughly equal representation for all the four countries of the study.

3.3 Design and measured variables

Multiple linear regression analysis was conducted using the statistical analysis software SPSS to investigate how well the four theorized dimensions of psychological distance can predict levels of worry and impact evaluation of climate change. In order to investigate the items representing each theorized dimension of psychological distance, the following items from the EPCC survey were chosen variables to predict to investigate each of the three hypotheses:

First the variable worry was measured using the question: “How worried, if at all, are you about climate change?”. Second, the aspect of impact evaluation used the question: “Overall, how positive or negative do you think the effects of climate change will be on [the UK/France/Germany/Norway]?”. Last, policy support was measured using the question “In

Paris in December 2015, most countries agreed to an international agreement that aims to keep global temperature rises below 2 degrees. Do you support or oppose [France / Germany / Norway / the UK] being part of this agreement?”.

Dependent variables

Worry: Respondents indicated on a five-point Likert scale (1 =Not at all worried, 2 = Not very worries, 3 = Fairly worried, 4 = Very worried, 5 = Extremely worried) how worried they perceive themselves as about climate change, to respond to the following question: How worried, if at all, are you about climate change?”.

Impact evaluations: Respondents indicated on a five-point Likert scale (1 = Entirely positive, 2 = More positive than negative, 3 = Neither positive nor negative, 4 = More negative than positive, 5 = Entirely negative) how positive or negative they perceived national climate change consequences to be to respond to the following question: ‘Overall, how positive or negative do you think the effects of climate change will be on [the UK/France/Germany/Norway?’.

Policy support: Respondents indicated on a five-point Likert scale (1 =Strongly oppose, 2 = Tend to oppose, 3 = Neither support nor oppose, 4 = Tend to support, 5 = Strongly support) to indicate their extent of climate change policy support, to respond to the following question: “In Paris in December 2015, most countries agreed to an international agreement that aims to keep global temperature rises below 2 degrees. Do you support or oppose [France/ Germany/ Norway/ the UK] being part of this agreement?”.

Predictor variables (psychological distance dimensions)

The four theorized dimensions of psychological distance (temporal, social, geographical distance, and uncertainty) were acquired by using the following items from the EPCC survey:

Temporal psychological distance was indicated on a seven-point Likert scale (1 = We are already feeling the effects, 2 = In the next 10 years, 3 = in the next 25 years, 4 = In the next 50 years, 5 In the next 100 years, 6 = Beyond the next 100 years, 7 = never) as a measure of how close or distant they believe humanity will experience changes of climate change to

respond to the following question: ‘When, if at all, do you think [France/ Germany/ Norway/ the UK] will start feeling the effects of climate change?’

Social psychological distance was indicated on a five-point Likert scale (1 = Strongly disagree, 2 = Tend to disagree, 3 = Neither agree nor disagree, 4 = Tend to agree, 5 = Strongly agree) to measure if they believed other people will be more affected by climate change impacts, by reacting to the following statement: ‘Climate change is likely to have a big impact on people like me’.

Geographical psychological distance was indicated on a five-point Likert scale (1 = Strongly disagree, 2 = Tend to disagree, 3 = Neither agree nor disagree, 4 = Tend to agree, 5 = Strongly agree) to comment on the following statement: ‘The impacts of climate change are mostly going to be felt in other countries’.

The psychological distance dimension of **uncertainty** was indicated on a five-point Likert scale (1 = The vast majority of scientists agree (80% or more), 2 = Most scientists agree (more than 50% but fewer than 80%), 3 = As many scientist agree as disagree (50%), 4 = Some scientists agree (more than 20% but fewer than 50%), 5 = A small minority of scientists agree (20% or less) to measure how certain or uncertainly they perceive experts can confidently claim climate change happening. This scale was presented when proposed the following question: ‘To the best of your knowledge, what proportion of scientists agree that climate change is happening and that humans are largely causing it?’.

There was an option to refuse to answer ‘Don’t know’ for each of the questions, which was coded as missing value for analyses.

3.2 Procedure

The large-scaled survey used for the questionnaires covered a wide range of climate change related thoughts and opinions, which is further elaborated upon in Steentjes et al (2017). The survey items were worded and shaped in English before being further translated to German, French and Norwegian. The questionnaires were pilot tested in May 2016 in all four participating countries. The primary objective of the pilot was to ensure that participants could properly understand what the questions are asking for, which again tests whether the

questionnaire is translated to the exact same meaning for each language. Some questions were corrected after feedback, resulting in the final items used in the EPCC and the current thesis.

Three questions were chosen to be used as dependent variables as highlighted above, to measure climate change worry, impact evaluation, and policy support. Further, the predictor variables as highlighted above were used to investigate each of the four theorized dimensions of climate change attitudes: temporal distance, social distance, geographical distance and uncertainty. In addition, age and gender were included as control covariates. This summarizes all the items used for the regression analyses, further methodological choices have not been used as the current thesis is based exclusively on the pre-existing data from the EPCC survey.

3. Results

As described above, multiple linear regression analyses were conducted to examine relationships between the four dimensions of psychological distance and the dependent variables of climate change worry, risk perception and policy support. Additionally, control variables of sex and age was included for analysis to examine effects on the dependent variables.

4.1 Worry, impact evaluation and policy support across countries

As can be seen in Table 3 to 5 participants across countries taking part in the EPCC survey show:

Most of the respondents (71%) are at least 'fairly worried' about climate change. French respondents reported the highest percentage of both 'extremely worried' and 'very worried', and the lowest percentage of 'Not at all worried'. There's also a notable minority in all countries that are 'not at all worried' about climate change (9.75% on average across countries), and some who reported they 'don't know' (1%).

Most participants across countries (76%) reported that they view climate changes as at least 'more negative than positive'. Germans reported the highest levels of both 'more negative than positive' and 'entirely negative' responses on climate change impact evaluation in comparison to the other countries. Although most participants perceive climate change as negative, some uncertainty is prevalent as a notable proportion (20.25% on average across countries) responded 'neither positive nor negative', 1.5% responded that climate change is 'entirely positive', and 2.75% reported they 'don't know'.

A large majority of the respondents across countries (73.75%) reported that they either 'tend to support' or 'strongly support' their country being part of the 2015 Paris agreement that aims to lower global temperature rise. The highest proportion of supporting respondents were the Norwegians (83%). Similarly, as with worry and impact evaluation, there is a minority of respondents across countries that strongly oppose the Paris agreement (3.25% on average), as well as a minority of respondents that 'don't know' (3.5% on average).

Table 3: *How worried, if at all, are you about climate change?*

	Not at all worried	Not very worried	Fairly worried	Very worried	Extremely Worried	Don't know
France	5%	16%	37%	29%	13%	<1%
Germany	10%	21%	38%	22%	8%	1%
Norway	9%	14%	48%	24%	5%	<1%
United Kingdom	15%	23%	41%	12%	7%	1%

Table 4: *Overall, how positive or negative do you think the effects of climate change will be on [the UK/France/Germany/Norway]*

	Entirely positive	More positive than negative	Neither positive nor negative	More negative than positive	Entirely negative	Don't know
France	1%	7%	16%	52%	23%	1%
Germany	1%	4%	14%	53%	26%	2%
Norway	2%	11%	25%	47%	10%	4%
United Kingdom	2%	10%	26%	44%	13%	4%

Table 5: *In Paris in December 2015, most countries agreed to an international agreement that aims to keep global temperature rises below 2 degrees. Do you support or oppose [France/Germany/Norway/the UK] being part of this agreement?*

	Strongly oppose	Tend to oppose	Neither support nor oppose	Tend to support	Strongly support	Don't know
France	3%	5%	14%	32%	43%	4%
Germany	3%	5%	17%	38%	32%	5%
Norway	5%	3%	7%	23%	60%	2%
United Kingdom	2%	4%	24%	32%	35%	3%

Note: the content from Table 3 to 5 is taken from the EPCC survey report (Steenjtes et al., 2017).

4.2 Regression analysis results

Worry

Table 6 to 8 summarizes the descriptive statistics and analysis results when testing how well the four psychological distance and control variables can predict climate change worry. The multiple regression model produced $R^2 = .198$, $F(6, 3951) = 162.21$, $p < .001$. The absolute size of the B coefficients is largest for social distance (.274), sex (.266) and temporal distance (-.101), indicating that they are the most important predictors of worry. The coefficient of determination shows that 19.8% of the variance in climate change worry is predictable from the psychological distance and control variables. The p-value ($< .001$) is statistically significant, meaning that the results lays grounds for stating that psychological distance and sex can predict climate change worry. The beta coefficient (β) is significant for temporal distance*** ($\beta = -.155$, $p < .001$), social distance*** ($\beta = .310$, $p < .001$), geographical distance*** ($\beta = .056$, $p < .001$), Uncertainty*** ($\beta = -.134$, $p < .001$) and sex*** ($\beta = .124$, $p < .001$), but not for age ($\beta = .02$, $p > .05$).

(Note: *** = significant at $< .001$ threshold).

Table 6: Model summary of Worry regression analyses

model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.445	.198	.196	.963

Table 7: Further model summary of Worry regression analyses

Model	Sum of squares	df	Mean square	F	Sig
Regression	901.79	6	150.298	162.21	.000***
Residual	3660.9	3951	.927		
total	4562.67	3957			

Table 8: Significance of predictor variables

Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig.
(Constant)	1.895	.092		20.524	.000***
Temporal distance	-.101	.010	-.155	-10.420	.000***
Social distance	.274	.013	.310	20.959	.000***
Geographical distance	.048	.012	.056	3.925	.000***
Uncertainty	-.093	.010	-.134	-9.132	.000***
Age	.015	.009	.023	1.614	.107
Sex	.266	.031	.124	8.637	.000***

Impact evaluation

Table 9 to 12 summarizes the descriptive statistics and analysis results when testing how well the four psychological distance and control variables can predict climate change impact evaluation. The multiple regression model produced $R^2 = .051$, $F(6, 3951) = 35.23$, $p < .001$. The absolute size of the B coefficients is largest for sex (.266) and social distance (.128), indicating that they are the most important predictors for impact evaluation. The coefficient of determination shows that 5.1% of the variance in climate change impact evaluation is predictable from the psychological distance and control variables. The p-value is statistically significant, meaning that the results lays grounds for stating that psychological distance, age and sex can predict climate change impact evaluation. The beta coefficient (β) is significantly different from zero for Temporal distance*** ($\beta = -.084$, $p < .001$), Social distance*** ($\beta = .013$, $p < .001$) and Age*** ($\beta = -.056$, $p < .001$). Uncertainty* ($\beta = -.037$, $p < .05$) and Sex* ($\beta = .038$, $p < .05$) are also significant, whilst Geographical distance ($\beta = -.007$, $p > .05$) is insignificant.

(Note: *** = significant at $<.001$ threshold; * = significant at $<.05$ threshold).

Table 9: Model summary of Impact evaluation regression analyses

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.225	0.51	.049	.94470

Table 10: *Further model summary of Impact evaluation regression analyses*

Model	Sum of squares	df	Mean square	F	Sig
Regression	188.664	6	31.444	35.233	.000***
Residual	3526.118	3951	.892		
total	3714.781	3957			

Table 11: *significance of predictor variables*

Model	Unstandardized coefficients		Standardized coefficients		Sig.
	B	Std. error	Beta	t	
(Constant)	3.558	.091		39.274	0.000***
Temporal distance	-.049	.009	-.084	-5.207	0.000***
Social distance	.128	.013	.013	9.990	0.000***
Geographical distance	-.006	.012	-.007	-.479	.632
Uncertainty	-.023	.010	-.037	-2.298	.022*
Age	.074	.009	-.056	-3.575	.000***
Sex	.266	.030	.038	2.456	.014*

Policy support

Table 12 to 14 summarizes the descriptive statistics and analysis results when testing how well the four psychological distance and control variables can predict climate change policy support. The multiple regression model produced $R^2 = .059$, $F(6, 3951) = 41.23$, $p < .001$. The absolute size of the B coefficients is largest for Social distance (.129), indicating that it is the most important predictor for Policy support. The coefficient of determination shows that

5.9% of the variance in climate change policy support is predictable from the predictors of the analyses. The p-value ($< .001$) is statistically significant, meaning that the results lays grounds for stating that psychological distance, age and sex can predict climate change policy support. The beta coefficient (β) is significant for temporal distance*** ($\beta = -.115$, $p < .001$), social distance*** ($\beta = .149$, $p < .001$), geographical distance*** ($\beta = .062$, $p < .001$), uncertainty*** ($\beta = -.076$, $p < .001$) and sex* ($\beta = .033$, $p < .05$), whilst age ($\beta = .023$, $p > .05$) is insignificant.

(Note: *** = significant at $< .001$ threshold; * = significant at $< .05$ threshold).

Table 12: Model summary of Policy support regression analyses

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.243	0.59	.057	1.02231

Table 13: Further model summary of Policy support regression analyses

Model	Sum of squares	df	Mean square	F	Sig
Regression	258.512	6	43.085	41.225	.000***
Residual	4129.255	3951	1.045		
total	4387.757	3957			

Table 14: significance of predictor variables

Model	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig.
(Constant)	3.661	.098		37.338	0.000***
Temporal distance	-.074	.010	-.115	-7.156	0.000***
Social distance	.129	.014	.149	9.322	0.000***
Geographical distance	.052	.013	.062	4.004	.000***
Uncertainty	-.051	.011	-.076	-4.756	.000***

Age	.014	.010	.023	1.463	.143
Sex	.070	.033	.033	2.144	.032*

Inter-variable correlations

The correlation between dependent variables, predictors and control variables are shown in Table 15. Temporal distance (worry = -.245; impact evaluation = -.123; policy support = -.158) and social distance (worry = .365; impact evaluation = .192; policy support = .181) show the highest predictability of the dependent variables, especially for worry. Geographical distance (worry = .057; impact evaluation = -.004; policy support = .061) and (worry = -.190; impact evaluation = -.075; policy support = -.111) show lower predictability of the dependent variables, especially for geographical distance's prediction on impact evaluation.

The scores of how strongly the predictor and control variables correlates with one another are generally low, which implies that they provide measures of separate and methodically distinct topics in relation to the dependent variables. This implies that the predictors used in the analyses measure different aspects of psychological distance, which further strengthens the reliability of the outcomes from the each of the analyses.

Table 15: *Correlations between all variables*

	Worry	Impact evaluation	Policy support	Temporal distance	Social distance	Geographical distance	Uncertainty	Age	Sex
Worry	1.00								
Impact evaluation		1.00							
Policy support			1.00						
Temporal distance	-.245	-.123	-.158	1.00					
Social distance	.364	.192	.181	-.187	1.00				
Geographical distance	.057	-.004	.061	.043	.040	1.00			
Uncertainty	-.190	-.075	-.111	.211	-.106	.011	1.00		

Age	-.033	.082	-.006	.018	.153	.031	.093	1.00	
Sex	.152	.054	.048	-.045	.095	-.023	.054	.024	1.00

Results summary

Overall, the results indicate that the psychological distance dimensions of temporal, social and geographical distance, uncertainty, as well as age and sex can be used to predict levels of climate change worry, impact evaluation and policy support. Notably, all predictors contributed towards forecasting climate change worry, except for age. Looking at climate change impact evaluation, it was found that both control variables as well as all dimensions of psychological distance yielded significant results to make predictions, except for geographical distance. Lastly, all variables were found to be significant to predict climate change policy support except for age.

4. Discussion

4.1 Main findings

Moving on, the key findings from the results from the current thesis will be elaborated upon in the light of the research question and hypotheses, to discuss their meanings, implications and limitations.

The main aim of the current thesis was to investigate the effects of psychological distance on climate change risk perceptions and policy support. To reiterate, the following research question is studied: What are the effects of psychological distance on climate change risk perception and climate change policy support? This is important to investigate as it is mostly acknowledged by researchers that climate changes are anthropogenic (Budyko & Izreal, 1991; Urry, 2015, and most lay individuals trust this acknowledgement (Steentjes et al., 2017). However, most individuals who acknowledge the severity of climate changes generally do not engage in significant enough ameliorative behaviours to result in a carbon neutral or negative footprint. The results of the present thesis indicate that there is a relationship between psychological distance and climate change risk perception and policy support, whereas those with greater psychological distance are on average less worried, evaluate climate change as less severe, and are less supportive of climate ameliorating policies.

When looking back at the research question proposed in the introductory part of this thesis, there is sufficient evidence to make a statement. Individuals scoring high on psychological distance also show high levels of worry, more serious impact evaluation and more strongly support climate policies. This allows the current thesis to add on to pre-existing research papers perspectives on the relationship between psychological distance and climate change. The current findings are uniquely taken from surveys with a large number of participants and a wide variety of international responses from a broad span of ages, genders, occupations, regions and rurality. The relationship found in the current thesis adds more recent findings to supplement previous research on psychological distance and climate change perceptions, such as papers of Spence, Poortinga and Pidgeon in their British and American sample from 2011.

4.2 Hypotheses evaluation

***Hypothesis 1:** There is a relationship between psychological distance and climate change worry, whereby those with greater psychological distance are less worried about climate change.*

All four dimensions of psychological distance, as well as sex provided significant results to claim that they can predict higher levels of climate change worry, laying grounds for confirming the hypothesis. The only measured variable that yielded insignificant results was age, which implies that the participants of the study did not show differing levels of climate change worry across age groups. This means that hypothesis 1 can be confirmed and allows making a statement to suggest that there is a relationship whereby levels of climate change worry can be predicted based on scores on all four dimensions of psychological distance. The findings of the present thesis on the interactions of climate change worry fits well with previous research on psychological distance, as individuals with great psychological distance tend to show lower levels of concern, and vice versa (Spence, Poortinga, Pidgeon, 2011).

***Hypothesis 2:** There is a relationship between psychological distance and climate change impact evaluation, whereby those with greater psychological distance evaluate climate changes less severely.*

Three of the four dimensions of psychological distance, as well as sex provided significant results to claim that they can predict more severe climate impact evaluations, laying grounds for partly confirming the hypothesis. The only measured variable that yielded insignificant results was geographical distance, which implies that the participants of the study did not state that they thought climate changes would be more serious in other countries regardless of which country is impacted by climate changes. This means that hypothesis 2 can be partly confirmed and allows making a statement to suggest that there is a relationship whereas levels of climate change impact evaluation can be predicted based on temporal and social psychological distance, as well as uncertainty. An interesting finding of the current thesis, as previous research on geographical psychological distance has found that people perceive climate change as more likely to impact geographically distant places (Spence, Poortinga, Pidgeon, 2011). Spence and colleagues continue by explaining that these impacts might be more severe as many developing countries that are geographically distanced from Europe

lack resources or infrastructure to deal with the impacts. The results from the 2011 paper only investigates the perceived severity of climate change and the relationship with geographical psychological distance, and found that the participants thought impacts were more likely to be felt in distant countries, whereas severity was not rated. Building on to this, the findings of the present thesis implies that individuals from the western parts of the world perceive climate change impact severity as similar at home in comparison to other continents. However, to the best of my knowledge, there seem to be a lack of published papers on the relationship between geographical psychological distance and the severity of individuals' climate change evaluations.

***Hypothesis 3:** There is a relationship between psychological distance and climate change policy support, whereby those with greater psychological distance are less supportive of climate change ameliorative policies.*

All four dimensions of psychological distance, as well as sex, provided significant results to claim that they can predict higher levels of climate change policy support, laying grounds for confirming the hypothesis. The only measured variable that yielded insignificant results was age, which implies that the participants of various ages did not show differing levels of policy support. This means that Hypothesis 3 can be confirmed and allows making a statement to suggest that there is a relationship, whereby levels of climate change policy support can be predicted on all four dimensions of psychological distance. Previously published papers on climate change policy support have found that most individuals are morally concerned (or worried) about climate change (Doran, Böhm, Pfister, Steentjes & Pidgeon, 2018), which Spence and colleagues found to indicate psychological distance. However, the current thesis proposes a more direct link in between climate change policy support and psychological distance.

4.3 Control predictors

The control variables of sex and age were added to the analyses to enhance the internal validity of the analyses, to limit the influence of confounding or extraneous variables. There is limited available research on sex differences on climate change risk perception, and most relevant studies focus on the agriculture sections in Africa. However some studies have found a significant relationship between sex and climate change perception and adaptation (Falaki,

Akangbe & Ayinde, 2017), and that a higher percentage of men in comparison to women report perceived climate change impacts (e.g. change in rainfall, temperature, wind levels or draughts), although the differences are small (Swai, Mbwambo, Magayane, 2012).

Interestingly, the control variable of sex found significant results in the analyses to support all three hypotheses, which implies that someone's sex plays a role that relates to their climate change perceptions and policy support. However, this result is not further elaborated upon as it is outside of the main scope of the current thesis.

In a similar manner as to the amount of available research on the relationship between climate change perception depending on sex, there has not been published much literature specifically investigating the effect of age on climate change risk perceptions and policy support. One study on young people's behavioural decisions in the context of climate change found that teenagers are aware of the fact that climate change is happening, but their understanding of the link between their transportation decision-making and impacts on climate change is weak (Line, Chatterjee & Lyons, 2010). However, it can also be argued that old individuals have lived long enough to have encountered a wider variety of climate in comparison to those younger, which naturally means that they have personal experiences of how average weather is now in comparison to decades ago (Quin & Adger, 2011). However, the implications are unclear of such studies regarding making statements of whether older or younger individuals are likely to score higher or lower on questions of climate change worry, impact evaluation and policy support. However, there are examples of young individuals that are passionate about combating climate changes, such as the environmental activist Greta Thunberg (Thunberg, 2019), who might act as a role model encouraging young global populations to take stances on climate changes. The results of the present thesis did not find any significant results on age for predicting climate change worry or policy support, which implies that age is not an important variable for predicting such climate change thoughts. However, there were found significant results for age in the impact evaluation analysis, which implies that the role of age might play a role. However, this result is not further elaborated upon as it is outside of the main research scope of the current thesis.

4.4 Explanations of main findings

It was hypothesised that each of the four dimensions of psychological distance: temporal, social, geographical, and uncertainty, will significantly predict climate change risk perception

and policy support. All the four dimensions were found to support the three hypotheses, except for geographical distance in the analysis on climate change impact evaluation. It is important to note that the participants of the EPCC study are exclusively European, which means that other parts of the world such as Africa are geographically distant to them. This sets a standpoint whereas it would be expected to find results supporting the hypothesis. The African continent is one of the parts of the world which is highly susceptible to devastating climate change impacts. Interestingly, the findings on the effects of geographical psychological distance contradicts some of the findings of research papers on climate change, whereas geographical factors indicate a stronger likelihood of more serious climate change impacts in developing countries (IPCC, 2001). One of the reasons as to why Europeans do not perceive the severity of climate change impacts to be different compared to in other countries might be related to experiences such as the heat wave in 2003, which showed that western countries can be adversely affected by climate changes (Ekong, 2016). This event of severe climate change impact in 2003 is possibly one of the reasons as to why the European participants of the EPCC do not perceive climate change impacts to be more severe in geographically distant places. It is interesting to note that geographical distance found an effect in predicting climate change worry and policy support. Followingly, as the rest of the analyses on the relationship between the dimensions of psychological distance and climate change worry, impact evaluation and policy support provided were significant, there are grounds to claim that the results from the current thesis compliments the findings from various papers on psychological distance and climate change.

The findings of the present thesis indicate there is a link between psychological distance and climate change perceptions and policy support. As mentioned earlier, it is important to not disregard the impact of individual actions to benefit global climate change developments (Hiller, 2011). Theories such as The dragons of inaction (Gifford, 2011) elaborates upon the observation that there are a number of barriers inhibiting individual climate action, and the Construal level theory lays a basis for ways in which researchers can try to solve this challenging issue by making abstract perceptions of climate changes more concrete (Trope & Liberman, 2010). However, there are arguments debating that the construal level theory's applications for explaining and predicting climate change related behaviours is limited (Brügger, 2020). Brügger argues that the construal level theory in practice has been used incorrectly by implying that psychological distant events are less relevant than more proximal events, that psychological distance is a stable individual credence, and that there are

inconsistencies in the way of which the theory attempts predicting outcomes of climate belief change. He follows by providing directions to suggest ways of which future research are recommended to be conducted, however there is no finalized theory presented to replace the standpoint the construal level theory currently have on climate change interventions. This implies that the construal level theory is currently one of the key theories that can be used to understand individual climate behaviours, but that there is a potential for a more effective framework to be further developed.

4.5 Limitations and implications for future research

The participants of the EPCC survey accounted for a wide selection of various representations to ensure a high-quality sample. However, there is still a limitation in all participants being from western European countries. As the analyses measured perceptions of geographically distant locations, it would be interesting to see if similar or different results would be found if surveying individuals from other parts of the world. As highlighted in the introductory part of the current thesis, there are indications that the effects of climate change are likely to more severely impact developing countries in the African continent due to their already high temperatures, as well as worse infrastructure standpoints to deal with climate consequences. It might be interesting to examine climate change risk perceptions and policy support in individuals residing in various African countries, to compare how they score on the dimensions of psychological distance in comparison to the Europeans of the EPCC survey.

Furthermore, there is a limitation in the material choice of relying exclusively on self-reported measures, which are always a subject to potential inaccuracies. The individuals partaking this survey have reported whether or not they are worried about climate change or if they support related policies, but there are no investigations to follow if they engage in various behaviours that would lie in line with these perceptions. One way of which this issue could be tackled could be to follow up on the participants partaking the study, and investigate if for example those who reported high levels of climate change worry and climate support subsequently voted for political parties promoting the best climate policies.

Recommendations for future research include first and foremost the aspects as highlighted above, to see if individuals from other parts of the world than Europe have similar climate

change perceptions, and whether they act accordingly to their self-reported climate change worry or policy support. Building on the results of the current thesis, specifically that geographical psychological distance did not predict severity of impact evaluation, could be interesting with the objective of further investigating which factors explain this result. Additionally, shall a future framework replace the construal level theory, as proposed by Brügger (2020), this should be closely investigated to consider implementing for future research on climate change risk perception or policy support.

5 Conclusion

The present thesis contributes further analysis on climate change risk perceptions and policy support with psychological distance as the primary barrier inhibiting individual action to ameliorate on-going serious climate change developments. These are central themes within the environmental psychology branch that encompasses climate related issues. Examination of such perceptions are important to the field of environmental psychology as it helps expand upon our available information on the underlying requirements for individual behaviour adaptation. The following research question was used to examine this topic: What are the effects of psychological distance on climate change risk perception and climate change policy support? The results from the analyses found that individuals scoring high on psychological distance for the most part tend to be less worried about climate changes, rate the severity lower, and show less policy support. The exception for this was the dimension geographical distance, which did not predict impact evaluation, meaning that the participants of this study did not perceive climate changes as more severe in other geographical parts of the world than Europe. Improving our understanding of the underlying barriers inhibiting individual action such as psychological distance is crucial for enhancing their environment ameliorating behaviours. This allows answering the research question by stating that the effects of psychological distance on climate change risk perception and policy support are almost fully corresponding. Further research on how psychological distance can be reduced is therefore one of the key objectives to focus on in order to achieve lowered environmental footprint from the world's global citizens, to ultimately and collectively contribute towards reducing climate change and reaching the goal of the 2015 Paris agreement.

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