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The lived experience of coping with emotional responses to climate change

An existential phenomenological study

Hovedoppgave

NTNU

Kunnskap for en bedre verden

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Preface

I have long been interested in climate change and climate psychology, and I have written term papers about the subject in previous semesters of my psychology degree. Therefore, I quickly realised that I wanted to write about the topic for my graduate thesis as well. Inquiring into potential projects, I was introduced to Michalina Marczak and her PhD project about emotional responses to climate change. Following guidance from her, I landed on a project in which I employ an existential phenomenological approach and explore the lived experience of coping with emotional responses to climate change among people who are concerned about the issue. I was very fortunate to be able to base my study on the 33 interviews conducted and transcribed by her and her colleagues. I wish to thank my supervisors Michalina Marczak and Christian Klöckner for guidance, inspiration, and feedback. I feel I have learnt so much in the process of writing my thesis, and it has introduced me to perspectives on both climate change, societal issues, and life that will stay with me. Finally, I wish to thank my partner, friends, and family for supporting me throughout the process.

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Abstract

Climate change represents one of the most serious challenges of today and a growing body of evidence documents the psychological impacts of climate change, including strong emotional responses to awareness of the problem. In light of this, it is important to explore how people cope with these emotional responses. The present study was conducted in Norway, with participants who self-identified as concerned about climate change. 33 semi-structured interviews were analysed using a descriptive empirical phenomenological approach with an emphasis on existential concerns. The purpose of the study was to explicate the lived experience of coping with emotional responses to climate change, and the analysis yielded five overarching themes: accepting the reality of climate change and adjusting hopes and plans accordingly, channelling emotions into climate action, navigating social dilemmas and seeking connectedness, developing new approaches to nature and life, and striving for balance in life. Employing an existential phenomenological approach, the findings provide insight into the oftentimes ambivalent and paradoxical experience of coping with a global climate crisis that may be said to bring people in close contact with existential concerns. Moreover, the findings indicate that a more open and inclusive public discussion and discourse about climate change and emotional responses to climate change, may benefit coping. The study encourages caution when it comes to individual level focus and responsibility and calls for more attention to collective action and urgently needed societal measures.

Keywords: climate change, emotions, coping, phenomenology, existentialism.

Sammendrag

Klimaendringer utgjør en av de mest alvorlige utfordringene i dag, og det er økende evidens for psykologiske konsekvenser av klimaendringene, inkludert sterke emosjonelle responser til bevissthet om problemet. Dermed er det viktig å utforske hvordan folk håndterer disse emosjonelle responsene. Den nåværende studien ble gjennomført i Norge, med deltakere som identifiserte seg som bekymret for klimaendringene. 33 semistrukturerte intervjuer ble analysert ved hjelp av en deskriptiv empirisk fenomenologisk tilnærming med vekt på eksistensielle temaer. Formålet med studien var å beskrive opplevelser av mestring av emosjonelle responser til klimaendringene, og analysen resulterte i fem overordnete temaer: å akseptere klimaendringenes virkelighet og justere håp og planer deretter, å kanalisere emosjoner til klimahandling, å navigere sosiale dilemmaer og søke forbindelser, å utvikle nye tilnærminger til naturen og livet, og å streve etter balanse i livet. Ved hjelp av en eksistensialistisk fenomenologisk tilnærming gir funnene innsikt i den ofte ambivalente og paradoksale opplevelsen av mestring i konteksten av en global klimakrise som kan sies å fremkalle eksistensielle spørsmål. Funnene indikerer at en mer åpen og inkluderende offentlig debatt og samtale om klimaendringene og emosjonelle responser til klimaendringene, kan bidra til å fremme mestring. Studien oppfordrer til forsiktighet når det kommer til individuelt fokus og ansvar og etterlyser større oppmerksomhet rundt kollektiv handling og sårt tiltrengte samfunnsmessige tiltak.

Nøkkelord: klimaendringer, emosjoner, mestring, fenomenologi, eksistensialisme.

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Introduction

There is no doubt anthropogenic climate change is happening. It is already implicated in many extreme weather and climate events, such as heatwaves, heavy precipitation, droughts, and tropical cyclones, in every part of the world (IPCC, 2021). In summer 2022, large parts of Europe have been experiencing heatwaves, drought, and/or forest fires, and record-breaking temperatures have been recorded, e.g., in the UK (Kirby, 2022). Following increasing scientific evidence, mass media coverage, and political debate, public concern about climate change appears to have grown to consensus levels in the years since the 1980s, when the problem started to gain recognition (Boykoff & Yulsman, 2013; Nisbet & Myers, 2007). Also, the last decade has seen a rise in concern about climate change in the EU (Baiardi & Morana, 2021).

Human activity, primarily in the form of burning fossil fuels such as coal, oil, and gas, has been the main driver of climate change since the 1800s. Burning of fossil fuels emits greenhouse gases, like carbon dioxide and methane, that act as a layer around the planet and trap heat from the sun, causing a warming of the atmosphere, ocean, and land (Schneider & Lane, 2006). The primary emitters of greenhouse gases include the energy sector, industry, transport, buildings, agriculture, and land use (UNEP, 2020). The current concentrations of greenhouse gases are the highest in 2 million years. As a consequence, the Earth is now approximately 1.1°C warmer compared to pre-industrial levels. Also, since 1970, global surface temperature has risen more rapidly than in any other 50-year period over at least the last 2000 years (IPCC, 2021).

The Intergovernmental Panel on Climate Change (IPCC, 2021) has evaluated several scenarios for emissions of greenhouse gases in the future, and in all of them, global surface temperature will keep rising until at least the middle of the century. Also, without profound reductions in emissions of greenhouse gases, global warming will reach and surpass the infamous 1.5°C and 2°C levels during the 21st century (IPCC, 2021). Thousands of scientists and government reviewers have agreed that in order to avoid the worst consequences (e.g., in relation to sea level, biodiversity, food security, water supply) and to maintain a habitable planet, global warming must be limited to at most 1.5°C. The Paris Agreement, adopted in 2015 by 195 countries, is a legally binding international treaty that has set as its goal to limit global warming to well below 2°C, preferably to 1.5°C (Falkner, 2016).

Efforts to reach this goal are, however, currently failing, as greenhouse gas emissions continue to rise. Following an unparalleled drop of 5.4% in 2020, emissions of carbon dioxide

returned to pre-COVID levels in 2021. The nationally determined contributions that countries have submitted so far reduce projected 2030 greenhouse gas emissions by only 7.5%, whereas the required reduction is 30% for 2°C and 55% for 1.5°C (UNEP, 2021).

As noted, human influence like fossil fuel burning is the main driver of climate change. Since the Industrial Revolution, humanity's imprint on nature has increased and continues to do so (Ehlers & Krafft, 2006). Human activity has pushed natural and human systems beyond their ability to adapt and has caused and will cause changes in the ocean, ice sheets, and global sea level that cannot be reversed for centuries, or even millennia (IPCC, 2021, 2022). As a consequence, some philosophers and scientists (Crutzen, 2006; Lewis & Maslin, 2015) have proposed that Earth has entered a new geological era: the 'Anthropocene' (derived from the Ancient Greek words *anthropo*, for '[hu]man', and *cene*, for 'new'; Boykoff & Yulsman, 2013). This term denotes a geological epoch of human domination and exploitation of Earth's natural environments. Budziszewska and Jonsson (2021) noted that, in the Anthropocene, humans have brought the climate systems and environment near the breaking point, and, paradoxically, shown unprecedented agency, in forcing the planet into a new geological era, but also unprecedented powerlessness, in, thus far, failing to mitigate climate change. Given the pace at which the environment is changing and the scale of the changes, reflected in the Anthropocene, there is a need to investigate how people experience this psychologically.

Health impacts of climate change

The changing climate poses an extensive threat to people's health. As noted, climate change is already causing many climate and weather extremes all over the world. Impacts like heat, acute effects of natural disasters, increased spread of climate-sensitive infectious diseases, and undernutrition hold potential for serious or even life-threatening harm (Watts et al., 2019). People aged 65 years and older are particularly vulnerable to extremes of heat (Li et al., 2016; Åström et al., 2011). Also, heat has been associated with violence and aggression (Miles-Novelo & Anderson, 2019), as well as higher frequencies of suicide (Carleton, 2017; Page et al., 2007). Ecological disasters may lead to physical injury or death, damage to property, displacement of individuals and families, and prolonged disruption to a wide range of community services. In this perspective, they are directly or indirectly a source of psychological distress. Experience of an ecological disaster has been linked to several adverse health effects, e.g., sleep disturbances, depression, PTSD, anxiety, complex grief, and increased or altered substance use (Morganstein & Ursano, 2020).

Furthermore, although difficult to quantify, there are several downstream risks associated with climate change (Watts et al., 2019). One such risk is migration. Circumstances such as rising sea levels, degradation and loss of land, declining abundance of fish, contamination of water resources, and degradation of coral reefs may make areas undesirable to live in, or right-out uninhabitable, and result in migration (McMichael et al., 2012). Another possible downstream risk of climate change is conflict. Climate change has been predicted to reduce availability of natural resources, which could incite conflict over the resources that remain (Bowles et al., 2015). In particular, changing climates may breed conflict in areas that depend upon agriculture and when combined with other socioeconomic and political factors like low levels of economic development and political marginalisation (Koubi, 2019). Both migration and conflict pose major threats to human health and wellbeing (Bhugra, 2004; Hassan et al., 2016; Mindlis & Boffetta, 2017; Porter & Haslam, 2005).

Increasingly, attention is also drawn to emotional responses associated with perceptions or the mere awareness of climate change. Several surveys provide evidence that people who are not necessarily directly or acutely affected by climate change events, are nonetheless experiencing strong emotions as a consequence of knowing about the crisis (Clayton & Karazsia, 2020). In a survey conducted on behalf of the American Psychological Association (APA, 2020), about two-thirds of US respondents reported at least 'a little' «eco-anxiety» (defined as anxiety or worry about climate change and its effects), and about one-quarter reported 'a lot' of eco-anxiety. In 2016, 24% of Europeans (respondents from France, Germany, Norway, and the UK) reported being 'very worried' (Steentjes et al., 2017). In addition, Berry and Peel (2015) found that more than half of rural Australians (56%) were worried about climate change.

In Norway, worry about climate change has been found to be relatively stable over time, with a little under half (in 2022, 46%) of the population reporting being 'worried' or 'very worried' (Gregersen, 2022). An annual national survey called 'The Climate Barometer' («Klimabarometeret») reported that the Norwegian population put climate change as the second most critical challenge of today, narrowly surpassed by social inequality (Kantar, 2021). Furthermore, findings from neighbouring country Sweden indicate that one-third of Swedes worry about climate change (WWF, 2018). More specifically, 31% reported worrying on a weekly basis and 18% on a daily basis.

A recent study with 10,000 young people of ages 16-25 years old in 10 countries (Australia, Brazil, Finland, France, India, Nigeria, the Philippines, Portugal, the UK, and the US), found that most respondents were concerned about climate change, with nearly 60%

reporting feeling either 'very worried' (32%) or 'extremely worried' (27%; Hickman et al., 2021). The most commonly reported emotions in relation to climate change were 'sad', 'afraid', 'anxious', 'angry', and 'powerless', and more than 45% of respondents reported that their feelings had negative effects on their daily life and functioning. It is worth mentioning that worry was most considerable in countries that have already experienced direct consequences of climate change (the Philippines, India, and Brazil). The country with the lowest percentage of concerned young people was Finland, with 44% of respondents either extremely worried or very worried.

Climate anxiety and perceptions of climate change

As adverse emotional responses to awareness of climate change have attracted more attention from the media and scientists, terms such as 'climate anxiety' (Clayton & Karazsia, 2020) and 'eco-depression' (Stanley et al., 2021) have emerged. Clayton and Karazsia (2020) developed and validated a measure of climate anxiety, defined as «a more clinically significant 'anxious' response to climate change» (p. 9), with some items adapted from existing clinical scales. The measure was comprised of two correlated subscales, one assessing cognitive-emotional impairment, referring to rumination, sleep disturbances, concentration difficulties, and crying, and one assessing functional impairment, reflecting a diminished ability to work or socialise. Using this measure, they found in a sample recruited through crowdsourcing website Amazon Mechanical Turk that climate anxiety was not uncommon, especially among younger adults. Though scores overall were fairly low, a significant minority of respondents showed high levels of climate anxiety. Employing an adaptation of Clayton and Karazsia's (2020) scale, Wullenkord et al. (2021) found low levels of climate anxiety in a large representative German sample. They were not able to replicate the two subscales. In addition, they indicated that the scale measured a general climate-related emotional impairment rather than anxiety around climate change. They expressed doubts regarding the scale's ability to capture the essence of climate anxiety and differentiate it from other emotions.

At the same time, a number of authors have advised caution when it comes to the use of labels like climate anxiety and eco-depression, as they may induce associations to clinical conditions and risk pathologizing people's appropriate and adaptive emotional responses (Adams, 2021; Budziszewska and Jonsson, 2021; Marczak et al., 2022; Verplanken et al., 2020). In this vein, Marczak et al. (2022) called for more conceptual clarity when it comes to the notion of climate anxiety. They explored emotional responses to climate change and found

that anxiety-related feelings like apprehension, uncertainty, and hopelessness are only a fragment of the complex panorama of emotional experiences of climate change. Based on literature reviews and philosophical discussion, Pihkala (2022) proposed an initial taxonomy of climate emotions. The author described a wide range of emotions, including surprise, fear, sadness, helplessness, meaninglessness, guilt, indignation, disgust, anger, envy, contempt, interest, gratitude, and hope. In relation to sadness and grief, the author argued that measures and scales of climate grief should take into account that there are many forms of sadness and grief and cautioned against medicalising them.

Noteworthy, perceptions of climate change are influenced by the social and cultural context (Clayton, 2020; Fritze et al., 2008). The framing of communication about climate change affects people's understanding of the issue, as well as their responses, as do social processes such as social constructions of climate change and social comparison.

Coping with emotional responses to climate change

As a consequence of the evidence of psychological impacts of climate change, it becomes pertinent to explore how people cope with these impacts. Coping in general has become a widely researched concept within the social sciences (Folkman & Moskowitz, 2004). In Lazarus and Folkman's (1984) transactional theory of stress and coping, coping refers to a process that is initiated in situations of personal significance and in which the demands of the situation are appraised as taxing or exceeding one's resources. Coping responses are then efforts to manage or deal with these kinds of situations. Lazarus and Folkman (1984) proposed two main ways of coping: problem-focused and emotion-focused coping. The former involves addressing the problem and attempting to do something about it. The latter refers to strategies aimed at regulating or removing negative emotions. Later, Folkman and Moskowitz (2000, 2007) and Folkman (2008) formulated a third category called meaning-focused coping, which involves drawing on beliefs, values, and/or existential goals to activate positive emotions and motivate and maintain coping and wellbeing in stressful situations. Coping with emotional responses to awareness of climate change may be considered a proactive or future-oriented coping. In this context, coping has been tied to both psychological wellbeing and behavioural engagement with the issue (Ojala, 2012a, 2013; Homburg et al., 2007; Reser & Swim, 2011).

In a series of mostly quantitative and some qualitative studies, Ojala (2007, 2012a, 2012b, 2013) explored how Swedish children, adolescents, and young adults cope with climate change. Guided by the transactional theory of stress and coping, the author identified

both problem-focused, emotion-focused, and meaning-focused strategies. Problem-focused coping involved individual and collective action. Emotion-focused coping involved de-emphasising the threat of climate change, distancing, social support, and hyperactivation (e.g., rumination about guilt, helplessness, and fatalism). Finally, meaning-focused coping included positive re-appraisal (re-framing of climate change), existential hope, and trust in societal actors. Moreover, it was found that different forms of coping were related to wellbeing and engagement in different ways. Problem-focused and meaning-focused coping was positively related to engagement, while de-emphasising the threat was negatively related to engagement. Furthermore, problem-focused coping was positively related to general negative affect, whereas meaning-focused coping was positively related to general positive affect and life satisfaction, indicating the latter was a more constructive means of coping with regard to wellbeing as well as engagement (Ojala, 2012a, 2013). Ojala (2012a, 2013) advocated for strategies that were associated with both wellbeing and engagement.

In a questionnaire study, Homburg et al. (2007) investigated coping with global environmental problems and developed and validated a structure of coping scales based on the transactional theory of stress and coping and on previous research (Homburg & Stolberg, 2004). In all, they identified eight coping scales: problem solving, expression of emotions, denial of guilt, relativisation, wishful thinking, self-protection, pleasure, and resignation. They found that all scales were positively related to psychological stress caused by environmental problems, except resignation, which showed no correlation, and denial of guilt and relativisation, which showed negative correlations. The strategies of problem solving, expression of emotions, and self-protection were positively correlated with pro-environmental behaviour and non-activist public-sphere behaviour.

Drawing on data collected from a large sample of Australians, Bradley et al. (2014) emphasised that different coping strategies likely serve different functions at different points in the process from stressor exposure to behavioural response. They proposed four strategies: avoidance/denial, cognitive reframing, social support-seeking, and psychological adaptation. The fourth strategy was defined as a collection of four cognitive, affective, and behavioural responses: paying closer attention to climate change, accepting the threat it poses, approaching it with a problem-solving mindset, and adopting more pro-environmental values. The study found that all coping strategies predicted climate change distress and, with the exception of cognitive reframing, mitigation behaviour.

In a qualitative study combining inductive and deductive approaches, Ágoston et al. (2022) interviewed a climate-sensitive sample (sensitive due to their occupation, interest in

the topic, or experience of impacts of climate change) in Hungary. The authors distinguished six categories of 'eco-coping': taking actions/planning, confrontation, positive reappraisal/optimism, withdrawal/acceptance, problem avoidance/denial/wishful thinking, and social support. They echoed the view that adaptive coping serves both individual wellbeing and climate change mitigation and proposed that problem-focused coping (taking actions/planning and confrontation) and meaning-focused coping (social support) was more adaptive than emotion-focused coping (positive reappraisal/optimism, withdrawal/acceptance, and problem avoidance/denial/wishful thinking).

Additionally, a group of qualitative studies incorporating phenomenological perspectives have explored not coping per se but experiences of living with climate change and related phenomena. These studies have indicated that people are profoundly affected by emotional responses to climate change in a variety of everyday situations, like learning about the issue at school, watching the news, conversations at the dinner table, or outdoors in nature (Jones & Davidson, 2021; Kemkes & Akerman, 2019; Marczak et al., 2022; Norgaard, 2011; Verlie, 2019). Exploring lived emotional experience of climate change, Marczak et al. (2022) found that emotional experiences encompass a complex landscape of emotions that was not limited to possibly disruptive or paralysing feelings. The experiences had psychological, social, and political consequences and included mobilising anger, collective guilt, love towards nature, and a feeling of excitement and sense of community in relation to collective climate action. Kemkes and Akerman (2019) investigated the experience of living with climate change in a US community sample and found that emotional experiences were tangled with experiences of being part of an ecologically harmful system as well as experiences of being aware of the enormity and complexity of the threat of climate change. They emphasised the need for spaces in which people may face and process challenging emotional experiences that pervade everyday life amid climate change. Employing new materialist, non-representational, and posthuman approaches, Verlie (2019) proposed that living today, on this planet, is progressively becoming a process of «learning to live-with climate change» (p. 752), which involves grieving the loss of the world as it is known but also working towards a more liveable world, one that acknowledges the entanglement of humans and climate.

Existential psychology

As climate change poses several threats, both to people's safety, their survival, their future, coming generations, valued places, valued lifestyles, and so on, some authors have

described it as an existential threat (Ojala, 2007; Reser & Bradley, 2017). Hence, it seems natural that it causes (existential) anxiety, as well as a wide variety of other emotions. In the existential approach, existential anxiety is viewed as an essential part of life and of being human. Though it may involve unwanted or even disabling levels of unease, nervousness, worry, and distress, anxiety may also 'awaken' (or 're-awaken') the sense of being alive and, as such, be exhilarating. It may stimulate the person to act or experience, in an attempt to (re-)establish equilibrium (Spinelli, 2015). Existential psychologist Rollo May (1996) distinguished between normal anxiety and neurotic anxiety and argued that anxiety is not 'bad' in itself, but that problems may arise with failure to face or come to terms with it. Albeit in no regards an easy task, facing anxiety is considered a token of authenticity and courage (Rogers & Tough, 1996).

As self-aware creatures, humans know they are mortal and must learn to live with this knowledge. Human existence involves some basic premises that the person must come to terms with (Yalom & Josselson, 2014). Existential psychiatrist Irvin Yalom (1980) referred to these premises as 'the givens of existence'. In all, he proposed four basic premises of life: mortality, isolation, freedom, and meaning. Firstly, mortality refers to the transience of life. Isolation pertains to one's aloneness in the universe and the «unbridgeable gulf between oneself and others» (Yalom & Josselson, 2014, p. 267). Freedom means that life follows no inherent plan and, consequently, one is responsible for one's own life. Finally, meaning conveys that one must find meaning in life in order to sustain one's existence, although life itself is groundless (Yalom & Josselson, 2014).

Yalom (1980) and Yalom and Josselson (2014) emphasised the importance of addressing the givens of existence in psychotherapy and proposed that exploration of these existence themes is the defining feature of existential approaches to therapy. Existential psychotherapist Ernesto Spinelli (2015) argued that in order to grasp what existential therapy is and what is distinctive about it, «it is necessary to step beyond – or beneath – thematic existence concerns themselves and instead highlight the existential 'grounding' or *foundational Principles* from which they are being addressed» (p. 10). He proposed that existence themes are tied together by three foundational principles: existential relatedness, uncertainty, and anxiety. These principles underpin all variant approaches within existential therapy, much like the idea of the unconscious may be found in all variations of psychoanalysis (Spinelli, 2015).

At the surface, relatedness serves as a reminder that the person exists in an inseparable relation to others and the world. Delving deeper, the principle of relatedness represents an

alternative to the (dualistic) view that our experience of being begins with «an exclusively individually derived, separatist subjectivity» (Spinelli, 2015, p. 17). It argues that the sense of the self as separate and unique relies on a precondition of relatedness. In this sense, individuality emerges from relatedness. One may ask how this relates to the existential given of isolation, which refers to one's aloneness in the universe and may be experienced in the recognition that death is always solitary or that there may be moments when no one in the world is thinking of one (Yalom & Josselson, 2014). Spinelli (2015) addressed this apparent paradox of isolation and relation (relatedness). He argued that the experience of being isolated from others depends upon an awareness of and relatedness to others. Also, any recognition of relatedness relies, at least in part, on the individual being able to question their isolation. Spinelli's (2015) second principle, existential uncertainty, refers to the uncertainty of experience and that one may never predetermine how one will experience oneself in different contexts. The third principle, existential anxiety, is a consequence of the first and second principle in that it conveys anxiety about the relational uncertainties of existence, and highlights the double-layered nature of anxiety, stating that it may be both distressing and freeing.

The current study

Climate change represents a severe – perhaps the most severe – challenge of today and urgent measures are needed to address it. The fallouts from climate change are diverse and health effects are becoming increasingly apparent. Climate impacts have direct consequences for all life on the planet and they threaten biodiversity and people's health. In addition, emotional responses to awareness of climate change have received more attention lately, and research shows that people are experiencing a plethora of emotions in relation to climate change. Consequently, how they cope with these emotional responses becomes an important question. There is already some literature that has examined this question (Ágoston et al., 2022; Bradley et al., 2014; Homburg et al., 2007; Ojala, 2012a, 2013) and it has often linked coping to both psychological wellbeing and behavioural engagement. Additionally, some studies have explored phenomenological dimensions of living in the era of climate change (Jones & Davidson, 2021; Kemkes & Akerman, 2019; Marczak et al., 2022; Norgaard, 2011; Verlie, 2019). The current study combines a specific focus on coping with a phenomenological approach.

The study is situated in the privileged context of Norway, a country that is considered to be one of the most climate change resilient (King & Jones, 2021). Nonetheless, it may be

relevant to investigate privileged populations because of the growing evidence of concern and strong emotional responses in these populations as well. Though they may be economically and geographically shielded, empirical evidence indicates, as noted, that such populations may be psychologically affected by awareness of climate change (Clayton & Karazsia, 2020; Marczak et al., 2022; Wullenkord, 2021). Also, considering the link between coping and behavioural engagement, one may argue that it is important to investigate these populations' emotional responses and coping styles because privileged parts of the world contribute considerably to the progression of climate change (Climatewatch, 2022; Levy & Patz, 2015). Additionally, people's experience of coping may inform discourse and policy, and privileged populations have a large power to influence climate politics (Marczak et al., 2022). Simultaneously, the topic of coping with climate change in privileged parts of the world remains relatively new, and related phenomena relatively unexplored.

The aim of the present study is to describe the lived experiences of people who are concerned about climate change and, specifically, how they cope with the ensuing emotions. In other words, the goal is to gain understanding of the phenomenon of 'coping with emotional responses to climate change'. The term 'emotion' is understood here in a broad sense, as is common in research on climate change emotions (Pihkala, 2022). It refers to a variety of affective states, given different names in different fields of study, including feelings, emotions, affects, and moods (Pihkala, 2022; Smith & Leiserowitz, 2014). Several conceptualisations of coping have been proposed, but in this thesis, coping is understood to be a wide term, in line with Folkman and Moskowitz' (2004) definition, as «the thoughts and behaviours used to manage the internal and external demands of situations that are appraised as stressful» (p. 1). In order to allow for exploration with an open, curious, and wondering mind, in this work, coping includes all efforts to deal or live with adverse emotional states.

The methodology that guides the thesis' exploration of this issue, is phenomenology, or more precisely, descriptive empirical phenomenology (Finlay, 2011; Giorgi, 2009). This approach was chosen as it facilitates openness to what is in the material and calls for putting preconceptions and knowledge of theory and research aside. The aim was to capture the participants' lived experience of coping, without steering from existing theory or research, so that the experiences may speak for themselves and also the more unobvious meanings may be explored. Phenomenological approaches combine an attitude of openness with a move away from dualistic thinking such as separating body and mind, thoughts and feelings, self and others, and humans and nature (Finlay, 2011). In my view, if Earth has indeed transitioned into a new geological epoch, characterised by an unbalanced relationship between humans

and nature, it might be time to re-evaluate some of the «truths» about the world that have come to be taken for granted. Following this line of thought, a study of coping in the context of climate change, which is right at the centre of this imbalance, should benefit from adopting such a phenomenological attitude.

Phenomenological research incorporates existential issues and engages human concerns pertaining to life, death, choice, meaning, belonging, and so on (Finlay, 2011). The existential approach highlights the paradox contained in emotional states that are traditionally seen as negative or pathological. This way, it may circumvent the problem of medicalising natural and appropriate emotional responses (Budziszewska and Jonsson, 2021). In line with other studies exploring climate change emotions (Pihkala, 2022), participants of the current study describe a broad range of emotions (see also Marczak et al., 2022). The various, oftentimes paradoxical and undetermined, experiences of emotions and coping that they speak of are considered valuable in the existential perspective.

As the present study is an exploratory phenomenological study and, thus, is not guided by existing theory or research, the introduction does not present a firm theoretical framework on which this work is based but rather a general background including the current research and relevant themes in existential psychology. Next, the method section includes a presentation of the participants, procedure, and analysis, including an overview of the phenomenological method. In the results section, the different strategies that I found are grouped together in five overarching themes so as to structure the findings. However, the ambiguousness, overlap, and interaction that is found within and between the themes reflect the complexity and paradox inherent in lived experience. Subsequently, I discuss the findings in light of existing research and, as phenomenological approaches involve a concern for existential issues, in light of existential perspectives on emotions and dealing with emotions. In conducting an exploratory phenomenological study, I had no (deliberate or formulated) hypotheses coming into the process of analysing the interviews (e.g., regarding specific coping strategies). Followingly, I introduce some new concepts and findings from other studies in the discussion. In summary, the present study aims to supplement existing research on coping with climate change, which is a relatively young field. Also, to my knowledge, studies have mainly been quantitative and/or guided by existing models. By employing an exploratory phenomenological approach, the current study can be said to provide a 'fresh', nuanced, and inclusive take on coping with emotional responses to climate change in a Norwegian sample of people concerned about the issue.

Method

Participants

A total of 33 participants in Norway were selected through intentional sampling. In order to investigate strong emotional responses to climate change, sampling was directed towards people who self-identified as «worried about climate change» and who felt «that this worry affected their daily life». There is evidence that some groups of people are more prone to experience strong emotions in relation to climate change, e.g., environmental scientists (Wang et al., 2018) and climate activists (Kleres & Wettergren, 2017). Therefore, these groups were targeted, and e-mails were sent to environmental research groups and organisations. Potential participants were also approached via social media posts, posters at the NTNU campus, and chain sampling. There was a focus on reaching people of different ages, genders, and education, residing in different parts of the country, and embodying environmental engagement to various degrees and in various ways. Table 1 shows an overview of demographics of the participants.

Table 1

Demographics of the participants (adapted from Marczak et al., 2022, p. 5)

Age	Number of participants
Generation Z (18-23)	4
Millennial (24-35)	12
Generation X (36-55)	11
Boomer (56-74)	6
Gender	
Female	18
Male	14
Non-binary	1
Place of residence	
Urban – major city (over 65 000 inhabitants)	24
Urban – small city (up to 65 000 inhabitants)	7
Rural	2
Education	
High school (including current high school students)	5
Vocational school	2
University diploma	26

Procedure

The data was collected as part of Michalina Marczak's PhD project entitled 'Emotional responses to climate change and their links to mental health and climate action taking', developed under the supervision of Professor Christian Klöckner at the Institute of Psychology, NTNU. Semi-structured in-depth interviews with the participants were carried out from June to October 2020. The majority of the interviews (28) were conducted in English. However, a few participants (5), who did not feel comfortable using English, were interviewed in Norwegian. In these interviews, a Norwegian translation of the interview guide and additional materials were used. As a consequence of the COVID-19 pandemic, most interviews (26) were held either online or on the phone. For the remainder of the interviews (7), the interviewer and the participant met in person. All interviews were audio-recorded.

The interview guide consisted of open-ended and exploratory questions that were not formed from existing theories. The format of the interviews allowed examination of themes

that appeared spontaneously during the interviews. Each interview began with a brief collection of demographics, followed by an open exploration of the participant's emotions concerning climate change, prompted by some general questions. To further investigate the participant's emotions, psychological tools to help people identify and verbalise what they are feeling, namely Plutchik's (2001) 'wheel of emotions' and David's (2016) 'list of emotions', were presented. The words that the participant recognised as pertaining to their own emotional experience, formed bases from which to delve deeper into the context, intensity, and psychological and social consequences of the emotions, as well as the participant's ways of dealing with them. Coping strategies were examined via both explicit and implicit questions about coping (e.g., «What are the things that have helped you with your emotions?», «Think about a situation when you felt very strong emotions about climate change; what helped you cope with them?», «Are there any other things that you do that help ease your emotions?»).

The Norwegian Centre for Research Data (case number 206971) and the Regional Committees for Medical and Health Research Ethics (case number 89334) approved the research protocol and plans for data management. All participants provided informed written consent prior to inclusion. They received information about the aim and procedure of the study, usage of their data, and their rights, including the right to withdraw their participation at any time.

Analysis

The audio-recordings were transcribed verbatim. Interview mean duration was 59 minutes. The five interviews that were held in Norwegian were analysed in this language, and only quotes that were to be included in the text were translated into English. In undertaking the task of analysing the transcripts, I chose a descriptive empirical (or Husserlian) phenomenological approach. Phenomenology, in general, investigates a person's world as it is lived and experienced. By *world*, phenomenologists do not mean some realm that is 'out there', separate from the person, and not some subjective domain within the person either. Rather, phenomenologists view people as embedded in the world and it in them. It is this relationship that researchers may gain insight into (Finlay, 2011). The aim is to describe lived experience and capture the essences of everyday phenomena, i.e., moments, events, objects, situations, processes, and other experiences. Essences, or essential structures, are structures of a given phenomenon «without which it would not be that phenomenon» (Dahlberg, 2006, p. 11).

Phenomenology began with Husserl, who defined it as «the study of the essences of conscious experience» (Finlay, 2011, p. 44). He sought not to describe the world objectively but rather people's lived experience of it and its meaning to them. Furthermore, he introduced the concept of reduction, or bracketing, in which the researcher attempts to push scientific knowledge and habitual assumptions aside, to aid the search for essences of experiences and phenomena. This process can be seen as one of adopting a certain attitude, which has been named the phenomenological attitude. There are many things people tend to take for granted when it comes to everyday phenomena. The phenomenological attitude involves approaching the phenomenon in question with an open, curious mind, prepared to be surprised. A common misunderstanding is that this attitude implies a strive for objective description and minimisation of researcher subjectivity and bias, when, in fact, phenomenologists not only accept subjectivity as inevitable, but embrace it and aspire to be engaged and involved with the research, without losing touch with the open-mindedness of the phenomenological attitude. In order to identify essential features of phenomena, it is crucial to be able to tell them apart from features that are specific to the experience at hand or are chance occurrences. To undertake this task, Husserl suggested asking what aspects of the phenomenon are invariable, or, more specifically, removing or changing aspects of the phenomenon and asking if the phenomenon remains the same. If this is the case, then said aspects are not essential features. This procedure is called eidetic reduction, or free imaginative variation (Finlay, 2011).

Whilst various philosophers have taken Husserl's phenomenology in different directions, descriptive phenomenology involves a continuation of his original project: to describe the essences of phenomena. The aim is to «describe the structure of experiences and the manner in which they are given in consciousness» (Finlay, 2011, p. 94). The analysis stays close to the material, no theoretical interpretations involved. It seeks to envelope all richness and complexity in the material (Finlay, 2011). Adapted from Giorgi (2009), Finlay (2011) proposed the following stepwise analysis: (1) entering into the phenomenological attitude and bracketing preconceptions and past knowledge, (2) reading the material to get a «sense of it as a whole» (p. 97), (3) breaking this whole up into smaller units of meaning (codes), (4) intuiting implicit meanings, and (5) synthesising the findings and employing free imaginative variation to single out the essences of the phenomenon.

Additionally, Finlay (2011) suggested some requirements for researchers that proclaim their projects to be phenomenological. (a) The research should describe lived experience and meanings, both literal and implicit, given to the phenomenon in question. Here, the focus

should be on the phenomenon rather than individual experience. (b) The description should be dense and rich, explicating experience as fully as possible, embracing ambiguity and ambivalence. (c) Existential concerns, such as questions related to life, death, meaning, identity, and belonging, are central to any experience, and any phenomenological project should therefore be concerned with them. (d) Phenomenology calls researchers to abandon the dualistic thinking that Western sciences teach, and, instead, think of e.g., mind and body, self and other, individual and social, and feelings and thoughts, not as split but as intertwined. (e) The researcher should adopt the phenomenological attitude. However, many phenomenologists today also acknowledge the requirement to reflect on their preconceptions, as well as their role in the research. Their subjectivity can be both helpful and unhelpful when it comes to investigating a given phenomenon – it may pave the way for some understandings and close the door on others. This exercise of self-awareness is referred to as reflexivity. (f) Lastly, phenomenological research should retain potential to provide new knowledge of and insight into phenomena of the world.

The focus of the descriptive empirical phenomenological approach in this study was on describing the lived experience of the participants in relation to climate change, as well as on capturing the essences of the phenomenon of coping with emotional responses to climate change. My aim was to gain general insight into the phenomenon from individual experiences, placing the phenomenon itself at the forefront. Throughout the process of analysing the transcripts, I sought to practice the phenomenological attitude but also reflexivity. A focus on ambiguity and complexity, as well as existential issues, guided my analysis, and I tried to challenge dualisms. My analysis followed the steps outlined by Finlay (2011) and Giorgi (2009). The results are presented in the form of a thematic analysis (Braun & Clarke, 2006), with the themes explicating the essences of the phenomenon.

From codes to themes

The coding was done utilising the qualitative data analysis software NVivo (QSR International Pty Ltd, 2022). Table 2 shows an example of coding. The data extract is the answer that one participant gave when asked about what they do to help with their emotions and worry.

Table 2

Example of coding

Data extract	Coded for
I feel that on a personal level I am doing as much as I can, and it helps with at least feeling at peace, and 'okay, I've done my part, I can't do any more'. So, that's important for me to do, as much I can in every situation to make the right choices. That's something that calms my worry a little bit. And also, being an activist as well, and trying to do things with school strike, and signing, yeah, a lot of different stuff. So that also calms my worry a little bit, when I know that I did something good, at least. Although that feels so small. At least it's something. Also meeting other people that also care. That really has a positive impact on my mental health, I feel. It gives me this energy and power feeling, that… Yeah, that's something that really gives me energy, to see other people care about stuff. That can be anything, really, but especially this. So… To be part of this movement, and to be part of Greta Thunberg's movement, and everyone goes striking and everyone tries to do a difference. That kind of calms my worry a little bit.	Doing one's part

Activism

Impact of actions
The power of likeminded people

Community
Inspiration from others |

Once the coding process was concluded, I began going through all the codes I had created. Some extracts were moved from one code to another, and some were removed entirely. Then I began grouping codes together to create themes. Throughout the process, a sense of the essential features of the phenomenon of coping with emotional responses to climate change, developed. I came to view the phenomenon as one of navigating various challenges to various areas of life, in the context of climate change. The themes that were created from the codes, were meant to explicate the essences of the phenomenon. It took some manoeuvring but once the structure of themes felt right, I presented it to my supervisors, who were very familiar with the data. After some more tinkering, based on feedback from my supervisors, I decided on the structure that will be presented later.

Researcher's role

Phenomenology calls researchers to be aware of and reflect on their subjectivity and how it may benefit and disadvantage their research. The task of adopting and maintaining the phenomenological attitude is no easy feat, as many things tend to be taken for granted. Being a psychology student and having read extensively about climate psychology, theories of coping, and research on coping with climate change concern for other subjects and theses, but also being personally invested in the topics of climate change and environmentalism, I realised, from the beginning, that I would need to work actively on bracketing this knowledge and my own leanings, in order to be able to approach the analysis with an open mind. I started from a broad perspective and, in working with the transcripts, coded everything that I thought could somehow be relevant to the participants' experience of dealing with the concern and emotions they feel in relation to climate change. Throughout the process, I tried to stay aware and let the material speak for itself and show me the way, and to facilitate this, I kept a research journal, in which I wrote down and reflected on issues that came up whilst going through the transcripts.

One thing I found to be particularly challenging was not falling back on dualistic ways of thinking and seeing the world, as it is so ingrained in me. In my research journal, I reflected on the habitual categorisation of emotions into positive and negative ones, as well as the automatic drawing of a line between «cold» cognitive coping strategies such as analysing and rationalising one's emotions, and more «emotional» strategies like simply «feeling it» and letting the emotions run free. Emotions are complex phenomena, and, thus, labelling them as either positive or negative is an oversimplification of experience, which is much more ambiguous and paradoxical than that. Also, categorising emotions as either positive or negative, implies that some emotions are more acceptable than others. Furthermore, thoughts and feelings are inextricably linked.

Reflecting on how one's subjectivity may both help and hinder understanding, is an important part of practising reflexivity. As mentioned, I realised, early on, that I would need to work actively with myself to not let my personal investment in climate change and environmentalism keep me from approaching the analysis with open-mindedness to be surprised or discover new perspectives. Having said that, for me, climate change is emotional. I frequently recognised the feelings that participants spoke of, as things that I have felt myself. I hope to be able to convey the experiences of the participants and the intensity of their emotions, and perhaps leave the reader with some emotions of their own. The
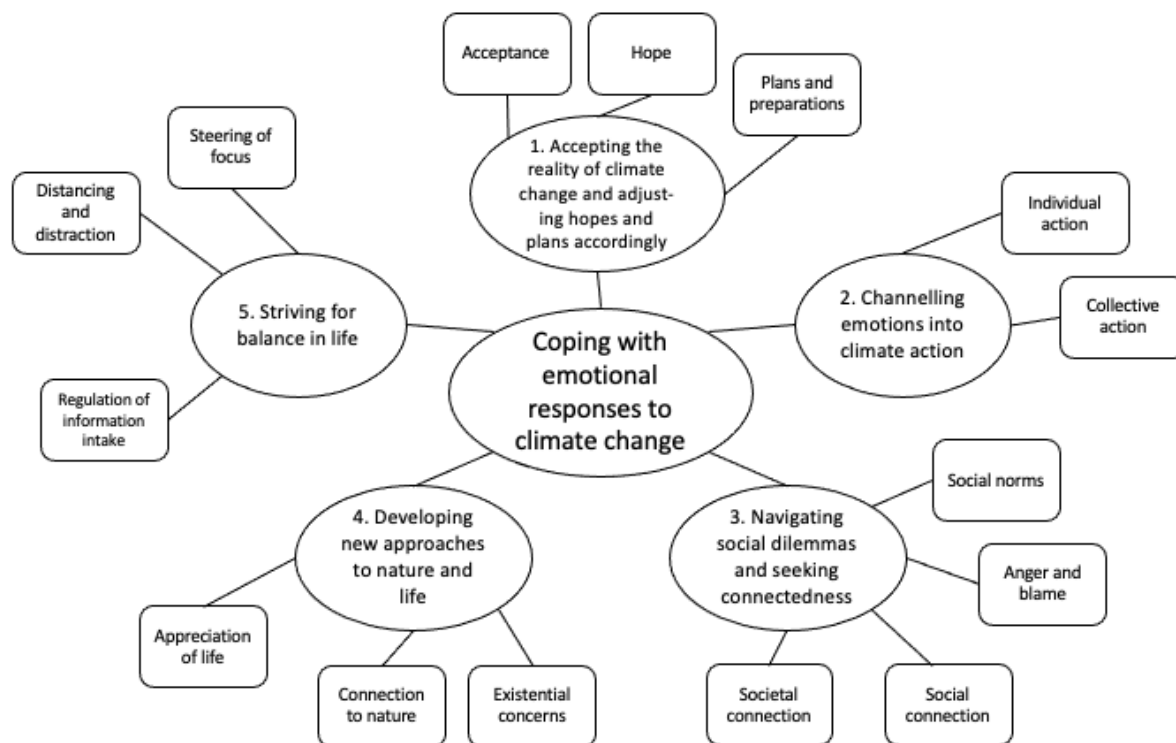
participants have all connected to climate change in some way. My hope is that the reader will be able to connect to it as well, through the experience of the participants.

Results

The phenomenon of coping with emotional responses to climate change may be understood as an ongoing process of carving out a way of living in the era of climate change. The analysis, based on a descriptive empirical phenomenological approach, yielded five overarching themes: accepting the reality of climate change and adjusting hopes and plans accordingly, channelling emotions into climate action, navigating social dilemmas and seeking connectedness, developing new approaches to nature and life, and striving for balance in life.

As phenomenology encourages people to disregard dualisms such as self vs. other and view them as intertwined rather than separate and isolated, it may seem 'un-phenomenological' to categorise climate action as either individual or collective action. Indeed, it may not always be a simple case to decide whether an action is individual or collective. However, as literature on climate action usually makes use of this distinction, I have, for simplicity, chosen to do the same. The same applies to other dualisms, such as positive and negative emotions. Nevertheless, as signalled in the previous sections, I embrace that they intertwine.

Each interview was given a number from 1 to 33, and references to individual participants are made by the use of their interview number in parentheses. Next, Figure 1 shows a thematic map of the themes. It is followed by Table 3, which provides a summary of the themes.

Figure 1

Thematic map of the five themes

Table 3

Summary of the five themes

Theme	Description
Accepting the reality of climate change and adjusting hopes and plans accordingly	The first theme describes three interrelated processes in adapting to the reality of climate change: acceptance, negotiation of hope, and planning and preparation. Acceptance involves accepting the hard truths of climate change and perhaps feeling more at peace having done that, knowing one does not have to resist these truths anymore. Negotiation of hope involves asking oneself how hope fits with one's (new) understanding of reality. It may be a step in the acceptance process, rejecting superficial hope in order to face reality, or a consequence of the acceptance process, a reformulation of hope that aligns with the reality one has accepted. Hope may also be a lifeline, something to hold on to in the face of this harsh reality. Planning and preparation refers to the steps taken to adjust to or prepare for an uncertain future, like learning skills to become more self-reliant.

Channelling emotions into climate action	The second theme describes coping through taking action. Engaging in climate action may ease adverse emotions by promoting a sense that one is doing something or doing one's part. However, it is useful to discuss different 'types' of climate action. Individual action (e.g., personal lifestyle changes) may bring some comfort but appears to be an ambivalent experience due to a mix of feelings of guilt and knowledge that individual behaviours have limited impact. Collective action (e.g., activism, being part of an environmental group) appears a powerful way of coping as it involves being part of a community and meeting likeminded people.
Navigating social dilemmas and seeking connectedness	The third theme explores the social dimensions of coping. One may feel alienated and isolated from general society and people who are perceived as careless. In order to cope with these feelings, one may seek connections with likeminded people (e.g., through collective action). Climate change is often deemed to be an unpopular topic, causing participants to avoid bringing it up in some or many social settings. It then becomes important to find 'spaces' where one may speak freely about climate change without feeling judged. One may seek to distance oneself from values and ways of living that one views as detrimental to the planet's collective health.
Developing new approaches to nature and life	The fourth theme describes coping by changing one's approach to or perspective on nature and life. Participants emphasise that humans and nature are not separate but one, and cope by connecting to nature or seeking refuge in nature. Climate change may remind people of their mortality, but appreciating life, being present, prioritising one's time according to one's values, and finding meaning and purpose in engagement with the issue may help the person face and cope with existential concerns associated with climate change.
Striving for balance in life	The final theme explores efforts to achieve balance in life. In order to cope, participants describe trying to establish a balance between engagement with the issue and seeing to personal needs by distancing themselves or taking breaks from it from time to time. One may wish to stay informed but also experience a need to regulate intake of information in order to protect oneself or stay afloat. Furthermore, one may cope by steering one's focus in various ways, e.g., by analysing emotions and asking oneself what

is helpful and what is not. Confronted with such a complex and lasting problem, it can be easy to succumb to negativity and pessimism but one may feel one cannot allow oneself to stay in such states for too long. In order to be able to sustain engagement with the issue over time, balance seems to be key.

Accepting the reality of climate change and adjusting hopes and plans accordingly

The sample consisted of people who self-identify as concerned about climate change. All of the participants have taken in the severity and urgency of the climate crisis, and they acknowledge their concern and emotions. For the most part, they allow themselves to feel the emotions stemming from taking the threat of climate change seriously (although the emotional experiences tend to involve some tension or require some negotiation). What they focus on varies somewhat but may, for example, be related to the acuteness, scope, inevitability, and/or irreversibility of climate change. Predictions of what awaits, at least if the current course is not changed, point to a bleak future: «collapse» (28), «catastrophe» (29), and «the end of times» (16). The following statement captures the desperate situation of knowing where it is headed but not being able to stop it:

«Like we're trapped in a system, you know, trapped in your own system. Just like you're driving downhill in your car and you can't get out of it because it moves too fast and the brakes aren't working and you know where it's heading. Just like that, that kind of feeling I got» (18).

Acceptance

The participants' statements involve some hard truths concerning climate change and its consequences, and they are then faced with the question of what to do with this knowledge and how to cope with the ensuing emotions. One answer may lie in the very acceptance of these painful truths: «Because it's too, kind of, I can't do anything about it. I have to accept it as it is. And when I can, I can find peace, in what is» (12) and «Now, I feel more at peace with the fact that this is happening. I came to accept that that's how it is» (15). If one can find some acceptance for what is happening, one may also find some peace, some relief from fighting what may be a losing battle:

«There is no point in trying to stop, to call back the train. The train has already left the station! And to accept that, that this is happening, I don't have to fight anymore to try

and keep it from happening. Now, I have to focus on how to adapt. That this climate change, it's happening already. So, that's where my main focus now lies. And that has really made me get rid of most of my anxiety […] So, I don't really feel that anxious anymore. Anxious is what I felt when I thought that there was something that could be done» (15).

Another participant speaks of the freeing feeling of accepting that one is vulnerable or that some things are outside of one's control:

«In some ways, I kind of feel quite calm. Because there's something like also nice about knowing that things are a little bit out of your control in a way. And just sort of going with the flow […] I think I find it more, more in a way stressful is to try to take control of the future […] Just like coming to terms with the fact that you don't know, you don't know what's gonna happen» (21).

It seems acceptance may help people cope with their concern and emotions in various ways. At the same time, it is important to realise that acceptance is not a straightforward process. There is a definite uneasiness and paradoxical nature to accepting the reality of climate change and its progression: «It's stages of denial and anger» (16). The truths of the crisis are harsh, and so, acceptance does not come easy. There is a paradox in accepting the unacceptable: «I wish I was a little on acceptance. I feel we've come too far to do anything about it. I think it's difficult to accept that» (24). Acceptance may help ease some emotions but be followed by other emotional states:

«I think I used to feel more afraid than I do now. I'm not so afraid anymore. But I do feel some acceptance, in the sense that I have – I am trying to accept that there is an ecological catastrophe happening, we will not be able to stop it, our society will not survive this. That's the acceptance part, I feel like… And then I'm feeling almost grief and anger that we are not doing more to avert this» (4).

In a similar vein, one may find it is more helpful to accept worry and let it be than to fight to keep it away. When asked about what they do to ease their worry, one participant responds: «I don't think I try to ease it. I just… My experience is that I have to feel it, accept it» (16). They report that this acceptance allows them to temporarily shake the brunt of the worry and proceed with their everyday life.

Hope

In the process of accepting the reality of climate change, questioning concepts such as hope and optimism, becomes logical. One may then come to realise that hope may not be as straightforward as it is oftentimes thought to be. It may even be a hindrance for acceptance:

«When they run out of arguments, and they say, 'well, don't you have hope?'. 'I have hope that we'll find a solution for all this'. And you just leave it there. And I think then hope can actually be a problem because it stops you from chasing facts and accepting reality as it is» (4).

Hope may then become a «passive word» (17). It may seem counterintuitive to 'give up' hope, but for people who are second-guessing this concept, giving up hope may mean one will be spared of disappointment should humanity fail, a scenario that one may view as not unlikely given the perceived lack of appropriate response from society and world leaders. In a sense, clinging to hope may be unhelpful when the reality is as harsh as it is perceived to be in this case. Instead, relinquishing hope may be a form of acceptance and, thereby, coping. In the case of climate change, hope has perhaps lost some of its weight and become something associated with naivety: «I think it's a bit naïve to think we can fix it. Because we can't. I think we're way too far» (12). When it stops discussions that may lead to constructive solutions and becomes a cushion, hope may become a concept that people who want to be 'part of the solution', may feel uncomfortable associating themselves and their experience with. It is perhaps possible, and even useful, to distinguish between giving up hope, as described, and losing hope.

A need to contextualise hope and optimism and ask what one hopes for and what one is optimistic about, has developed:

«I think 'hope' is a very complex emotion, because we can't really talk about hope without specifying what you hope for […] I'm not hoping that our society can continue as it is doing now, because that's not really possible. I'm hoping for something beyond that» (4).

Another participant says, «It's a choice of values rather than optimism» (1), referring to the need to define one's motivation and values: if one's priority is not the survival of our species, but rather the prosperity of other or future species, then one might feel optimistic about the progression of climate change and possible eradication of humankind. Hope may mean hope that nature will prove resilient and «survive and thrive with or without us» (11), or that «humanity will rise again, maybe a bit wiser» (18). This shift when it comes to what one's hope is focused on seems to come from a recognition that the (human) world as it is known

today, may not be salvageable. Hope for humans may not hold out, but hope is not relinquished altogether. It is redefined as hope that something (living) will go on and, as such, may provide the person with something to hold on to in order to cope.

Hope may be a sort of lifeline: «Things are looking down, but we have to stay optimistic» (2), «We need hope» (7), «I'm trying to stay hopeful» (12), and «It's impossible to predict the future, and there's some hope in that» (17). One participant explains that a friend of them felt relief from giving up hope, but that this is not an option for them, asking «what am I without hope?» (10). This shows hope may also be a motivation, a reason to go on. Perhaps, what is more important than how one understands hope, is being part of the solution. Hope may be understood as a stopper for acceptance and a hindrance for critical conversations and actual solutions, or it may be understood in a more general sense, as a necessary force without which one cannot possibly stay part of the solution. Coping may involve accepting reality and letting go of hope, or holding on to hope and letting it guide one (or a little bit of both):

> «I think, in that hopelessness, hope, it becomes more visible […] It's like, if you look at the sky, and they're only, like, three tiny stars, those stars become way more important and visible […] Like, most things we black out, and the places where there is hope in humanity and our conviction and feelings are so much more visible and important. So, I think you sort of grasp on to what hope and happiness you have more in a way, so I didn't make it completely… At no point has everything become completely black. I always managed to find points of light. Which sort of gives you direction, right?» (21).

One participant frames it this way: «I'm hoping for the best and planning for the worst» (2).

Plans and preparations

Because «The train has already left the station» (15), some of the focus has been shifted towards preparations for what is to come. One may initially have been shocked upon learning that it is too late to stop climate change, but, as one participant says, «You adapt yourself to the situation» (18). Once one has accepted the dire situation, one may begin to put more effort into adjusting: «I think we have to adjust quite enormously. Because we can't reverse it. But we can adjust in some way. And we have to be willing to adjust quite a lot» (12) and «When I understood that [feedback mechanisms], that's when I kind of found out that it's too late to act now. It's too… You just gotta do the best of it and try to make strategies for the future survival strategies» (18).

Different measures may be taken in order to adapt to the reality that one has accepted. One begins to plan and prepare for an uncertain future, e.g., by planning a life that aligns with one's values, making plans for a simple lifestyle, planning where to live (considering factors such as sea level, landslides, temperature, access to environmentally friendly products, etc.), learning skills that will help one become more self-sufficient (e.g., learning to grow one's own food, knitting and making one's own clothes, fishing, harvesting mushrooms, berries, edible plants, etc.), contemplating moving to the countryside and buying a piece of land or a farm, as well as mentally preparing. These behaviours are meant to increase the person's sense of security in the turbulent future that awaits. Today's society, in which the distance between the consumer and the product's origin is great, and things that are old or broken may sooner be replaced than mended, has not prepared people for a future in which they might have to be far more self-reliant. Hence, people may cope by seeking to close this distance and the one constructed between themselves and nature (see theme 4), e.g., by taking up practices and learning skills of their grandparents' or parents' generation. In a world that feels increasingly unsafe and alienating, people may find strength in learning how to fend for themselves and taking measures to protect their future selves and loved ones:

> «I also shifted a bit what I am reading, from less about what things are happening, to how are people coping with it, and some constructive things to do. So, now I am doing more things like, I don't know, I started having – growing some food in my apartment. It's only a few plants and it's not like it matters in a broader kind of context, but it feels good to kind of handle skills that maybe someday could be useful to helping someone else» (5).

As a consequence of taking the threat of climate change seriously, one may end up having doubts, guilt, fear, or regrets about existing or hypothetical children, centred around the belief that it is not safe or kind to bring kids into this world, as one predicts future generations will have to endure a lot of hardship. For people that are considering not having children because of climate change, this can be seen as another way of planning for, or adjusting plans to, an uncertain or even hostile future.

Channelling emotions into climate action

As described, coping involves accepting the reality of climate change, negotiating hope in the face of that reality, and adapting to it and what it might mean for the future. These processes should not, however, be equated with giving up on doing something about it. Indeed, there seems to be a strong will to limit the damages or slow down the pace at which

climate change is progressing. To continue the metaphor of climate change as a moving train: «The train has left the station, but we can still steer it, try to get it off the cliff, or at least slow down the pace» (15). Furthermore, climate action seems an essential part of coping. The prevailing feeling seems to be that to give up or stop fighting for what one believes in and acting on what feels right, is inherently wrong and insensible. One may ask what is left if one has given up: «If you don't care, what's your purpose?» (13) and «Thinking it's too late would be to give up and then I wouldn't have a reason to live, I have to believe that to live, we can do something, but not fix it completely» (12). Or what the alternative is: «It's certainly too late if we don't try» (26) and «We have everything to lose not to try» (8).

Knowledge of climate change and its progression, as well as coping with the emotional burden of knowing, must be reconciled with personal beliefs and values. The participants highlight the importance of doing one's part and being part of the solution and not the problem. They want to be on the right side of history and be able to say that they tried. That makes waiving personal responsibility in the face of this global crisis and leaving it at that, problematic: «I still feel we can do some action that can help. Like other people I talk to, I feel like they are 'there's nothing to do! We're fucked!' and if I start to think like that… then… no, I can't do that» (20). Some people have values and beliefs that will not let them give up and/or urges them to act. Their sense of what is right and important, encourages them to cope with their worry in a way that activates or engages them instead of pacifying them.

Having said that, it may be hard, at times, to keep the spirit going and doubts away: «I try to force myself to not have this feeling ['is kind of too late'], but sometimes I can't help it […] In a way I'm trying to lie to myself and say, let's go on, there's stuff to do» (3), «Sometimes I want to give up, but I can't give up» (12), and «People who say it's too late to do anything about it are probably right, but I don't want to give up» (28). Faced with such a severe issue, it seems inevitable that there is some tension, with some voices saying, 'it's useless', and others compelling one to not give up, no matter what, because what is the alternative? Furthermore, in order to get a sense of achievement from taking action, one must believe that said action has a value of some sort. It might be a compromise: «It's better that something happens than nothing, anyway. In terms of limiting damages» (27). Despite the lingering doubts, taking action seems an important strategy for coping: «What needs to be done is so big, my coping mechanism is to try to concentrate on the things, on the practice of it, that I can actually do something» (15). Participants speak of feeling good about doing something, of getting involved to ease their worry, and «putting the money where my mouth is» (19).

Individual action

A large proportion of the sample (27 out of 33) report being engaged in individual actions and efforts to lead an environmentally friendly life. Several behaviours are mentioned, e.g., eating a vegetarian or vegan diet or reducing meat consumption, reducing food waste, buying local products, reducing general consumption, buying clothes second-hand, recycling, avoiding plastic, avoiding or reducing travel by plane, driving an electric car, gardening to save bees, and conserving electricity and water. On their own, these actions might seem small, but the person may still find them meaningful: «When I make Christmas presents, I use newspapers, or wrapping… and stuff like that, just like small things. That feels… It feels meaningful, in a way» (31). Individual behaviours may help the person feel they are doing their part, which, in turn, may provide some peace of mind and acceptance:

«It [individual behaviours] helps in acceptance feeling, kind of. Because I can say to myself, 'I do what I can!'. I have to be happy with that, in a way. At least I do what I can. Yes, it's a part of the acceptance feeling» (12).

«I feel that on a personal level I am doing as much as I can, and it helps with at least feeling at peace, and 'okay, I've done my part, I can't do any more'. So, that's important for me to do, as much I can in every situation to make the right choices. That's something that kind of calms my worry a little bit» (10).

However, as everyday life is full of complex decisions that may somehow be related to climate change, it is easy to end up feeling guilty about choices that are perceived as harmful or for not doing enough: «I feel guilty whenever I consume something I shouldn't. And I have tried to, well, to change my patterns of consumption because of that» (4). Individual actions seem to be entangled with guilt and attempts to avoid guilt and clean one's conscience:

«There's definitely guilt, I would say. That goes also for sitting on an airplane. Yeah, there's guilt for sure. That's a good word. And I think that's also what I want to avoid. I'd rather not feel guilt and be a little bit hungry than feel guilt and eat something that has a large footprint. I found myself stuck in some situations like that sometimes» (1).

«It [travelling by train instead of plane] doesn't make a big difference, but it's good for my conscience» (24).

«It [individual action] kind of cleans the conscience… I think so. It's kind of a selfish, yet not selfish thing. Because it makes me feel better» (31).

Ultimately, experiences associated with individual behaviours become difficult to unravel: «I don't know if individual actions make me feel good, they just make me not feel bad» (17). They seem to bring some tension:

«I think it's strange, on the one hand I don't want to believe this [individual action] is helping at all. At the same time, it helps me personally to cope with emotions of it, to feel that I am doing something, at least» (5).

The recognition that individual behaviours have limited effect, if any at all, may lead to feelings of insignificance and powerlessness in the face of global climate change. The acknowledgement of the limited impact of individual behaviours, does, however, not necessarily keep participants from feeling guilty about «bad» behaviours or for not doing enough. Though they realise the issue cannot be solved by their personal choices, they still feel personal responsibility. And so, they seem almost to get a sort of paradoxical double negative effect from individual level behaviours when it comes to mitigating climate change: they feel like what they do is of little significance, and yet what they do not do and what they do «wrong» make them feel guilty.

Collective action

Several participants (24 out of 33) report being involved in collective action, e.g., supporting environmental organisations financially or being a member of and/or voting for the Green party; arranging or participating in school strikes, demonstrations, or protests; sending letters to politicians or companies; writing in the local paper; spreading information in an organised capacity; and teaching. Being involved in collective action provides participants with a feeling that they are personally doing something:

«Being an activist as well, and trying to do things with school strike, and signing, yeah, a lot of different stuff. So that calms my worry a little bit, when I know that I did something good, at least. Although that feels so small. At least it's something» (10).

«I think it [collective action] gives me hope. Makes me feel like I am personally doing something, you know?» (11).

Furthermore, collective action may be especially powerful because of its potential to affect other people:

«It [climate action] feels good. I have to think about it as a good thing. When I stand there, in [name of city], sometimes it's all by myself, sometimes we are two or three, but sometimes it can be all myself. And I think, if I can put this climate thought into people's mind, by just seeing me, with my sign, yes. So yes, it gives me empowerment, absolutely» (12).

«So, sort of giving it attention is also an action, I think. Putting it on the agenda and that… Well, then I think I'm more in the happy part, more relaxed, thankful» (29).

As such, collective action may feel more helpful than individual action when it comes to coping:

> «Like teaching at [academic institution] has really, really helped me in a lot of ways where I teach this class, saving the world isn't rocket science, and seeing the shifts in behaviour and seeing people actually get affected by this, that really makes an impact on me and makes me feel like I'm doing something which is quite helpful […] And it [individual behaviours] feels quite good in the moment. I wouldn't say it's as deep and emotional like, 'yay!' for myself, as like teaching or getting other people to understand that this is an issue […] And I, I feel more strongly in the other direction. If I don't want to go cycle I feel more guilty than the benefit I get from cycling» (2).

Being part of an environmental organisation may provide the person with a sense that they can do something and have the tools to cope with their emotions:

> «I feel more empowered, I feel I have tools that I can use to do something and I think that that has a big, big impact on how I feel around things. So… yeah, maybe, maybe mainly after joining [name of environmental organisation], because I, I took part in holding trainings for activists and also students and I learned a lot of tools» (33).

One specific aspect of being engaged in collective action or part of an environmental organisation that is particularly powerful when it comes to coping and easing difficult feelings, is the social aspect, e.g., acting alongside others, being part of a community, and meeting likeminded people. Meeting people who are on the same page as oneself, may protect the person from feeling isolated: «I'm not isolated, there are very many who are keen on doing things. Since these organisations I've been in contact with very many likeminded people» (32) and «It was so nice to join [name of environmental organisation] because there people agreed and we can discuss details on what to do» (28). Being engaged in collective action may be a source of emotions that may help make the experience easier to bear:

> «When I see how other people strive to do something about it or when we work together. When we have been sitting together in demonstrations, for instance, or… and that can make me feel very thankful. And content in a way» (29).
> «I think when you do something to avoid or to mitigate climate change, you actually meet so many people at once. So that's also super positive» (13).
> «I can feel excited sometimes, when I am on a school strike, or when I meet other people, and I feel like we are kind of doing something» (10).

Environmental organisations may represent a social 'space' that stands in contrast to other social arenas in the participants' lives: «I don't feel isolated because I think that there is a

good community to be in an activist group […] At the same time, you're a little bit isolated at work or in society because you feel that others aren't at the same page» (17).

Navigating social dilemmas and seeking connectedness

People who recognise the need for urgent measures may feel isolated from general society, which, in their view, continues to show a lack of engagement with the ongoing crisis. As a consequence of the way governments and leaders have responded – or failed to respond, one might say – to climate change thus far, one may feel disappointed or disillusioned. One may even lose faith in humanity altogether and begin to question the goodness or ingenuity of the human species. Feelings of isolation and alienation may also come up in everyday encounters and personal relationships with family, friends, and colleagues that are perceived to not be concerned about climate change:

> «It's hard to interact normally with people who aren't on the same page, I'm going around realising we're in the middle of this big crisis, and I just feel it all the time, other people are just living their lives, not caring, totally unaware, it makes me feel lonely and also angry and disappointed» (10).

Being happy on behalf of people in one's life who are going on trips or buying things, becomes difficult with the ever-present awareness that these behaviours may be considered detrimental when it comes to climate change mitigation and evoking the changes that one views as necessary. Relationships with people who one perceives as careless when it comes to climate change can be difficult, and disagreements with close ones may come up. Coping with the burden of one's concern then becomes a question of coping with feelings of isolation and alienation.

Social norms

There seems to be a feeling that climate change is an unpopular topic in many social circles: «Many people… I often get the reaction that people think this is very sad and difficult, and therefore they don't want to talk about it» (4). In some environments, talking about it is «frowned upon» (14). Bringing it up invokes guilt in others (15) and one does not want to be «moralising» (7). Nonetheless, one may experience a wish or need to talk about it: «This is something I feel and want to talk about […] I think it's not the right thing to confront people. I know that… but I feel I want to» (7), «I don't feel like I can really talk about what's most important for me» (17), and «I need to talk about the things I see that I feel are horrible» (26). One may want to speak about climate change in a deeper – less shallow and superficial – capacity than is generally allowed in one's social circles, and this may create a dilemma: «It's

the balance between taking it seriously and not being a pain in the ass» (12). One has strong feelings about the topic and therefore wishes to speak about it – and one's feelings – but finding a space for it can be difficult with the prevailing social norms associated with the issue. One way to handle this is to refrain from bringing the subject up with people who are perceived as careless: «It can be hard sometimes in relationships with people who don't care about this at all […] I fix it by just talking about something else» (25). Adhering to social norms and avoiding the subject may help the person keep their relationships or place in the group. When this strategy is chosen, it may be because it is viewed as more detrimental to be outcast than to have to keep certain opinions or experiences to oneself:

> «I don't want to be a mood killer, I don't want to be a person who, ah, is always talking about that, 'she's always making me feel guilty, ah, I can't spend time with her, because you know, she's always having to nag about this climate change, and blah, blah, blah'. I don't want to be that person! You know. So, I normally don't bring it up. Unless it comes up naturally in the conversation, I'll say something about it, but I very rarely really dig into it» (15).

Withdrawing from certain relationships or social circles is also an option: «I can tell that it affects others negatively, I can tell that they can't handle it. And then it gets to me withdrawing» (26). It is, however, difficult not being able to share one's concern and emotions with others: «The hardest thing is that my knowledge, my feelings are a burden to others» (16).

Anger and blame

When describing coping, it is also relevant to describe what is experienced as impeding coping. Anger seems to be viewed as a state that is unwanted, perhaps because it is uncomfortable or tiring to be angry («I don't like to be angry, because it's… It's annoying to be angry» [23]), but also because it might not be tolerated or well-received in some social spaces, and so, coping with anger becomes important. The feeling may be that anger does not help anybody, it is not a 'place' one wants to stay in, at least not for too long a time:

> «I also feel anger because nobody seems to care about it… So, I feel anger towards the government but also towards my friends and family. I have to fight it, of course, because it's not useful and I am aware of that» (7).

In order to cope, to maintain one's social ties or contribute to the issue in the fashion that one wishes to, one may feel a need to regulate or avoid anger (at least expressions of anger). One may feel angry upon seeing people behave in non-environmentally friendly ways, but

deliberately shift one's focus from the people to what is happening in order to soothe the anger: «I know that sometimes people are not thinking in that movement. I judge more the thing that is happening and not the person per se because I really don't know them» (13) and «I try to cope with it in a way so I can have focus not on the people […] Doing that is radical evil […] These people are just like you and me. But what is happening is radical evil» (19). There is the view that polarities are more harmful than the little things that people do in everyday life that are not environmentally friendly:

> «I remember being at the gas station and somebody would stop their car and go without turning off the engine. That would make me actually angry almost to the point where I would walk up and actually turn off the car or talk to the person. But that doesn't happen anymore, and I don't think that it is any… I'm really scared, I think of positions, creating polarities and conflicts is more harmful, or it's something that will make it so much harder to deal with things that might need to deal with» (1).

In a similar vein, there seems to be an unwillingness to engage in blaming specific persons or groups for climate change. The prevailing sentiment seems to be that it is hard to blame anyone in particular as all are implicated to some extent, and the problem is too complex to be blamed on the behaviour of a few: «We are kind of all guilty in a way. And I guess that's kind of positive in a way because it's more difficult to really be angry» (5). However, as climate change progresses and governmental and societal responses are perceived as too slow, it can be said that it is only natural to feel anger towards governments, politicians, leaders, 'the system', our culture, and so on: «I want to be a good person and don't blame anyone, but it's impossible to not feel some blame and anger towards them [the government]» (10). This can perhaps be taken to provide some insight into the complex and paradoxical experience of anger (in the context of climate change). One may find oneself grappling with one's anger, seeing as there is no straightforward way to channel it. Though some of it may be directed towards the system and so on, recognition of the complexity of the crisis, as well as of one's own part in it all, tends to complicate things. The relationship to anger seems to be somewhat unresolved.

Social connection

In order to cope with feelings of disconnectedness from general society and friends and family that are not on the same page, the person may seek points of connection where they can be found, first and foremost, with likeminded people. Connections may be found in environmental organisations, as described, or on social media: «I feel pretty lonely about it.

Except when I engage in internet groups about what's called deep adaptation concept and permaculture. Yeah, at least that's the group where other people think about it like me» (6), «I am using these Facebook groups, and some, to see, to not feel so alone, to see, okay, there are other people out there, who have these feelings, or who are concerned about similar things as I am» (15), and «If it wasn't for the social media I'd be very isolated» (18).

There seems to be an appreciation for interactions with likeminded people and fruitful conversations about climate change. Talking it out and being able to share one's feelings on the subject with someone else, may help the person cope: «I am very glad when I can find people that actually think the same things that I do. So, my friend […] – we talked a lot about it, and it's really, it's really helpful» (14) and «Digesting these emotions together can be really helpful» (21). Support from close ones may help participants cope: «It's good to talk to him [partner]. So, I can tell my family how I feel, and they understand me. They share it too. So, that's good» (12) and «We can actually talk about climate change, and I can express my worries to him [partner], without isolating myself» (15). As mentioned, not being able to talk about something one cares deeply about, is challenging. Simultaneously, the opportunities that do arise, are much appreciated: «I love talking about it, I love having conversations with people about what's wrong and what's right and what they think, and they feel, and how they live their lives, is like my favourite topic» (20) and «To me, it's a gift to be able to talk about it» (16). Environmental engagement may, to some extent, shape one's relationships, having one gravitate towards people who share one's views:

> «When this takes up as much time in me and takes up a lot of my time and they don't really care about the same stuff, then it's – I feel like we don't have that much in common. So, it can be a little hard to talk sometimes, and I feel like I have to be fake in some cases. When I have to seem more happy and hopeful than I actually feel inside. So, then that has maybe change a little bit and I feel like I really want to… explore and find other kind of friends, a little bit, who is more, has more similar mindset» (10).

The feeling of being heard seems to be particularly important: «I can't have a close friend that don't accept what my kind of worry with climate change is» (14) and «So, discussing with people who know a lot about climate and maybe has other ideas for solutions, because we agree that we must do something, that makes me happy, being heard, sort of» (28). One may feel a need to limit time spent with people who have very different values than oneself and/or priorities people who share one's values: «I try to spend time with her [friend], but I can't really be there for a long period of time, because it really starts to annoy me, you know, the

way she lives […] She's not very pro-environmental» (15) and «I'm more, eh, prioritising people, spending time with people who want to commit to change or contribute to such a change» (19). Discussions with people whom one does not necessarily agree with on everything, can also be helpful, as long as the discussion is one of mutual respect: «So, we had good discussions, and respected each other's opinions, and still can be good friends, despite disagreements» (11).

Though, as described, some may find being part of an organisation provides a sense of community and helps them cope, others may struggle to find their place in these groups. They are unable to connect to the ideas and narratives of the organisations, and these environments become yet another place where their concerns are misplaced, or they cannot find what they need. One participant describes that they could not speak to people about the great sorrow that they felt, «Even within the environmental movement, it was like I had the plague, you have to have hope is the message in these organisations» (16). There are several avenues for meeting people with similar interests, and one may find some avenues more suited to one's own mindset at the time than others:

> «I took part in this [name of course] […] [on] how to create a future we want. And by doing this, and not only being in these activist circles, where people are saying 'no, no, no' to everything, and also looking at what we want, that has definitely changed something for me» (33).

The notion that what is of utmost importance is the sense of community – or rather being accepted by a community – becomes clear, then. Many may find this acceptance in environmental organisations, but not all. The point is not where one finds points of connection with others or a place to share one's feelings, the point is that one does. One may experience climate change to be a controversial topic in most social circles, and so, it becomes important to find 'safe spaces' where one can express and share one's concern and emotions. The points of connection that one does find may help one withstand the feeling of disconnectedness that one may otherwise experience.

Societal connection

The person who is very concerned about climate change finds ways to be in a society that they feel disconnected from but still is confined to. There may be a feeling of being trapped in the system and inevitably being part of a system that is destroying the planet. People who are engaged with climate change, do not shy away from their concerns about the issue and the ensuing emotions. In a similar vein, they do not (seek to) escape from society,

even if they find themselves disagreeing with many of its ways. Through adjusting to social norms when it comes to how the topic of climate change is discussed, and finding and appreciating connections with likeminded people, they find ways to exist in society, even though it is not always a pain-free existence. One may ask what the alternative is:

> «People are kind of buying a farm somewhere, they grow food and everything, bring the family there and I think it's a nice thought and I understand that you need to kind of do something with your life. But at the same time, I feel like this is kind of an illusion. Because you can't really live apart from the rest of society. And even if you manage to kind of, somehow, live in a farm somewhere and you don't need people, and you are able to get by yourself, what happens to the rest of society? What will happen to everyone else? […] In some ways, I wanted to contribute in for the people, as well, and not trying to run away. Although I really understand… I understand why people do that, and I sympathise. But it feels like a bit of escape, as well, for some people, at least» (5).

Another participant reflects on the tension:

> «I don't think it's, for me, like myself, isolation is not a bad thing. It's actually something that helps me stand in the kind of mainstream of culture and not be so much weighted by it. Um, but I do see if, if I want to advance political causes then I need to, I cannot isolate myself but actually speak to the values and feelings that people have about the situation […] so that they get involved» (19).

The participants seem to be faced with a dilemma when it comes to finding a space that feels comfortable for them to exist in. The inclination to distance oneself from some of society's ways and values, is opposed by forces that urge them to stay within its bounds. The wish to belong is not only based on security issues but staying in the group allows one to affect it more effectively than from the outside. Coping seems to entail finding ways that allows one to stay part of society without abandoning one's values:

> «I am gripping, actually, with how to not… not to let that rage overwhelm my life. Because the… You can't go around in rage all the time if you are going to function in the society […] I think it's difficult to function in the society. Because if you are too adapted, too well adapted to this society, something is wrong. Because the way we are living in this society is obviously wrong» (4).

The person feels an aversion to society as it is, and so, adapting in order to function and not betraying one's beliefs and values, becomes a tricky balance. There is potential for dissonance, and one must find a way to minimise this. One may speak of feeling isolated and

alienated, question hope, and feel disillusioned with the way general society and governments are approaching the issue of climate change, and still refuse to give up, keep insisting on the importance of limiting the damages, and refuse to leave humanity behind (though one may feel deeply disappointed and disillusioned with human nature). Doing so, however, requires the ability to live with several complex and paradoxical thoughts and feelings. Some thoughts and feelings contradict each other, they do not add up, and there is not an easy answer or solution for this tension. Every day, the person is faced with and must navigate these thoughts and feelings.

Even though one does not seek to disconnect oneself from society or people in one's life that do not agree with one's views, but rather seek out possible connections, there seems to be a wish to distance oneself from the ways of consumer society and materialistic values. This is not necessarily a contradiction. One may seek to distance oneself from (some of) the values of society and the economic system, without abandoning said society. The person questions the way of life, especially in relation to consumption, that capitalism has prescribed, and that some seem to take for granted.

Developing new approaches to nature and life

Taking the threat of climate change seriously tends to affect the person's everyday life in profound ways. One may even come to view life through a 'lens of climate change' (29). Every decision that can somehow be related to the issue, which include many areas and situations in life, is infused with some kind of an evaluation of options, outcomes, etc. in relation to climate change. The person feels the scientific knowledge and warnings from institutions such as the IPCC, acutely. As a step in the coping process, one may begin to approach life and nature differently than before, connecting to new values. Learning about climate change may encourage the person to question and re-evaluate taken-for-granted assumptions or «truths» about the world, leading to new perspectives. The climate crisis can perhaps be said to force a new way of viewing the world. It may bring disillusionment in the sense that illusions about the human species and its way of life have been shattered. In order to be able to make sense of the world again, a new perspective that aligns with this is needed.

Connection to nature

There seems to be a sort of newfound appreciation and respect for nature, paired with a criticism of the view of humans as superior to nature or of nature as something to use. One may even draw links to Christianity and its depiction of humans and nature in the Creation story of Adam and Eve, as well as its counterpart in indigenous religions, who have treated

the same relationship (that of humans and nature) differently (25). There is advocacy for an equal, co-dependent symbiosis. One may come to view the separation of humans and nature as, at least in part, the reason the world is in the midst of an ecological crisis:

> «I think that's why we are, mainly, that's the part of why we are here today, is that in our culture we divided ourselves from nature. And not see nature as a part [of] ourselves, and ourselves as being a part of the nature» (16).

Conversely, one may come to believe that the solution to our troubles may lie in humanity reconnecting with nature:

> «I think, and maybe there will be a religion, a new religion, believing in Earth and worshipping the earth […] You know, we've lost respect for nature, we just think it's there for us to use and, eh, throw away afterwards. If we respect nature and realise that we are just a part of nature and we are in it and we are working along with it, eh, then the problem may be solved» (18).

The respect for nature may encourage one to change one's habitual behaviour towards other species: «Before, I used to walk around with a fly swatter. Now, I capture the fly in a glass and let it out outside […] I feel I don't have, I have no more right to live than that fly» (24). Furthermore, the appreciation for nature may be linked to spirituality. One may come to experience oneself as closer to nature, even one with it: «I was sitting by the sea, and suddenly time stopped. And it was this great silence. And no borders. It was like being in the middle of one-ness» (16). Feeling part of nature may also help the person cope with thoughts of life and death:

> «I do enjoy my life, I very would like for it to continue, but still. When we are talking about questions such as these, that's… It's not really so difficult. And I think it also helps to believe in that death is not the end. Death is a beginning of something new. In a sense, I believe in reincarnation. And I am talking, again, about reincarnation in a very concrete sense. When I die, my body will be broken down, and it will become something different. It will be eaten by bacteria and bugs, and I will be, kind of, reborn, in other life force, in that sense» (4).

The person may seek refuge in nature. Being in nature may be calming and consoling, or even lead to a renewed sense of purpose:

> «Being in, um, in nature and especially, sounds like […] the wind in the trees or hearing insects or birds, these kind of helped me to… to […] find back to, eh, something that can contain and, um, embrace these […] challenging emotions. And

also maybe realise why I'm doing it […] What do I want to protect or what do I want to strengthen» (19).

However, nature experiences may also be tainted:

«I have a very strong connection to nature, and always loved nature, so these emotions kind of influence positive feeling that I have when I am in nature […] When I was a little girl these things, they were just nice and wonderful, and now there is this dark side to it» (10).

Being in nature may expose or remind one of the destruction and degradation of nature (31). Feelings of grief and sadness seem especially frequent in relation to nature:

«I love nature so much. For me, it's mainly sadness, I would say» (11).

«Most of all, [sadness] for the things in the world […] that don't have the voice, or don't decide what's happening. For me, I have, like, this really connection to the nature […] And for me, I think it's – I guess, it's for nature, or for the ocean» (14).

In this sense, connection with nature seems to be a double-edged sword. On the one hand, it may calm one's worry and reinforce one's will to act. On the other, it may make the person more vulnerable and concerned:

«Yes, I think it [spirituality and connection with nature] is a coping strategy, but I think it's also making you more vulnerable, in a way. Because if you start seeing the world as alive, then you are also hurt […] I think all in all it's a good thing, but it's… It also comes with challenges, as well» (4).

Connection to nature may lead the person to feel the changes humans are inflicting on the environment deeply and profoundly because it is part of them and they of it. The person sees no other option than fighting for what they believe is right because they themself are intertwined with nature and thus deeply affected by what is happening:

«When I'm, for instance, to myself, and I'm, when I'm present, I can hear birds singing or I see something beautiful unfolding [in] the nature and then I can… I can feel it emotionally. Yes, that we are losing… losing something deeply precious. And that we cannot afford to lose. So, then I'm very also quick in getting to anger and frustration […] How can I do something about this? We cannot, it cannot be. And then I start to think on ways on how I can contribute» (29).

Appreciation of life

In order to cope with concern and emotions, there seems to be an emphasis on enjoying life and being present, in the here and now. In a way, taking in the severity of

climate change is perhaps comparable to other life-changing events or challenges. Indeed, one participant compares it to receiving a diagnosis of terminal illness: «It's like getting a diagnosis of terminal cancer» (16). With stakes like these, it seems only natural that participants come to view life in a different light. Importance is placed on enjoying and appreciating life now, considering the uncertain future the world is faced with, but to do so in responsible and climate friendly ways:

> «I think, that's the biggest thing about being here, in the world, is enjoying life in responsible ways» (11).

> «Knowing that the future is so unstable and unpredictable you kind of have to live in a moment and do what you want to do and just enjoy life. But part of that is taking that reality in, right, and to also do what I can to make the world better» (21).

Taking the reality of climate change in, may affect how one views time: «It's more kind of centring me in what I want to do now […] It kind of has made my timescale, eh, much more closer to now» (19). Time, then, becomes more precious, and one may begin to prioritise differently, e.g., when it comes to who and what one spends it on:

> «I feel that I must be careful on how I spend my time because we don't have much time. So, I must not waste, waste my time […] I think I'm more aware of how I prioritise» (29).

> «I think is important to realise what was really important for you, and so, instead of travelling too far, for a few days and come back, spend more time with people you like. I mean there has to be a way where you have to reweigh, put weight on what's […] important for you and [what is] not» (3).

It may lead one to re-focus: «It just shifts your priorities, just like re-emphasises what was important all along. It sort of cuts through some of the bullshit I feel» (21). The experience may be paradoxical: «I feel nothing is worth doing actually, but I'm not depressed either. And now I'm more sarcastic, I'm more… but I also enjoy life in a different way. I live more for the moment» (18).

Though the person sees many faults with the present day and its culture, and is more or less doubtful when it comes to our chances in the face of this climate crisis, they contend that there are still some «beautiful moments» (5) worth celebrating. Filling one's life with meaning becomes important: «Knowing what I want in my life is […] building communities and relations and doing things that are meaningful to me. I will fill my life with meaningful things» (21). As a consequence, one may begin to struggle seeing the meaning or point of expending one's energy on something else as long as climate change is a threat: «I'm

frustrated that I cannot fully work in it [environmental organisation]. It feels, it feels a little bit meaningless to me to work in… [regular work not related to climate change]» (17). Coping seems to involve adjusting to the information at hand (on climate change), in part, by shifting one's perspective on life and what is important.

Existential concerns

Climate change threatens our security, lives, and future. In acknowledging this, it seems natural that thoughts about life and death come up. Facing such concerns is no easy feat, though:

> «I think sometimes I sort of catch myself thinking about 'oh, you know, when I'm old…' but then I'm like 'old! That's not gonna happen, is it?' Which is sort of terrifying. It's terrifying in such an around way that it almost feels like it can't be real» (21).

There are, however, some ways participants may help themselves take this challenge on, one being coming to terms with the reality of the situation and accepting one's vulnerability (see theme 1), and another being believing death is not the end and in reincarnation (see theme 4, above).

The existential threat of climate change may force the person to make a choice and take a stance when it comes to life and living:

> «I think it's important to get your focus off this problem from time to time, and just focus on what's around you for here and now […] Because, if you made a choice to live, which I have, obviously, then you just have to make the best of it» (10).

One may even come to view accepting one's mortality as a crucial part of living, at least in its true sense: «If you're not prepared to die, you're not prepared to live» (19). Furthermore, participants seem to cope with this by connecting to values, meaning, and purpose. As noted, knowledge of climate change has brought a new perspective on life, involving an emphasis on appreciating the little moments and being present. However, enjoying life does not mean exploiting economic or materialistic privileges. In the participants' view, the consumer lifestyle is not fit to provide people with happy, meaningful lives: «I am not interested in that. I don't think that makes a good life. I don't have to have things to be happy» (15). There is a tendency to take a clear stance against the values of consumerism and capitalism and believing that everyone would be happier with less. The circumstances surrounding climate change may be comparable to that of the Corona pandemic in terms of 'side-effects':

«I think like this pandemic too, it's good for us actually, we have rediscovered the nature of being close to each other and don't – not be so occupied with all those silly things all the time, I mean, we discover some of the values of life all the time. And I think we will do that after the climate crisis or during the climate crisis. Find back to life» (18).

Caring about climate change may give life purpose: «Enjoyment of life is really like having a purpose in life that caring about the environment is giving me, that's very enjoyable» (13). The person connects to a far-reaching phenomenon that transcends themself and their immediate surroundings, and thereby effectively connects to something greater than themself, a fight for something bigger. Climate change threatens their everyday way of life and their security, but it also provides an opportunity to connect to a greater cause. They want their carbon footprint to be as little as possible, but the mere existence of such a footprint may serve as a reminder that one is part of a bigger picture. However, climate change will not be solved in a simple manner by the actions of a few. Being concerned about and engaged with it demands that the person is able to live with worry and the knowledge of the existential threat that climate change is. The complexity of the issue is such that it requires engagement with it to be sustained for a prolonged period of time. This is no easy feat. Faced with an issue that cannot be easily fixed, in which one's efforts feel like drops in the sea, it requires will to keep the spirit of engagement going.

Striving for balance in life

With the emotional burden of taking in the threat of climate change comes a need to find balance in life by, at times, unwinding, distancing (disconnecting), or steering focus away from the issue of climate change. The aforementioned weight of taking the issue seriously and sustaining engagement, needs to be balanced by something. As noted, concern about climate change requires the ability to live with worry, and, in extension of this, coping with this worry requires the ability to keep it from overwhelming and consuming one's life. The person strives to find ways to balance living and knowing, and to prioritise their other needs through acts of self-preservation when this is required, in order to cope. Though the concern seeps through and reaches many parts of their lives, they also remind themselves that there are other things in their lives that are important. One participant sums up the need to attain some sort of a balance, as well as adjusting expectations and hope to fit reality, in order to cope:

«I am in between working with this and trying to distance myself a little bit. I think the best way for me to cope – because it's also unhealthy to work my ass off and try to do everything and have all this hope, all the time […] So, I think if I can work with it, and fight with realistic view, and not have too many hopes and dreams about the future, just working with what I have right now, and – at the same time – kind of distance myself a little bit, that's maybe the best way to cope, for me. Although, I am really struggling with that. You know, it's not easy. But I think that's kind of, yeah, what's the best for me to do.» (10).

The person may realise individual impact is limited, and this knowledge may help them attain some balance:

«I try to keep a balance between things that I sacrifice, and personal comfort. Because, at the same time, I think that, well, first of all, not even if I live in a total pure environmental perfect way, again, it doesn't change much. And, at the same time, if I'm living really, really badly, like my conditions are really, really annoying me… that may trigger […] the total […] opposite reacts, like, okay, then I give up on this. I hate it and I don't give a fuck. I'm gonna try to keep a balance. So, it's affecting my life, but not extremely hard» (23).

This may be considered a contrast to the double negative effect of individual action mentioned in the second theme, and thus a reflection of the ambivalence contained in lived experience.

Regulation of information intake

There seems to be a will to keep seeking knowledge and staying informed when it comes to the issue of climate change. It may provide the person with some semblance of control over what is happening: «I want to learn more so that I can use it for my activism or how to change my own life» (7). One participant relates that keeping a document of notes provides them with a way of channelling their emotions into something, and also a way to, literally, put the information away for some time. When asked if awareness of climate change can ruin their mood, they report:

«I wouldn't really say so, but I think this has also been one use of just having a document where I can write it down, when I feel a bit down, and I feel like I have written it down and I've done what I can do with that news. So, if that's a document I can close down or a news article, or kind of whatever, I can put that a bit about of my mind. So, that has been quite productive. I think otherwise I might have – well, I feel

that I have created this action that is essentially meaningless, but it still gives me a way to place this information somewhere. And if I really needed to go back and look at it, I can do that. But I don't really have to. So, that has been a relatively productive way of approaching that particular problem (5)».

Closing the document then becomes a sort of symbolic action. Whether done in this quite literal way, or in a more abstract sense, it seems important to be able to put the issue on hold at times.

Coping seems to involve a process of wrapping one's head around the issue and creating an understanding for oneself of what the issue is and what it means. The person seeks to define and refine the issue in a way so that they may make sense of and cope with it. At the same time, they feel the need to regulate their intake of information and news about climate change, e.g., by not reading news when down, taking breaks from reading about it, or steering their focus towards positive news:

«I think I've gone almost numb, you know, there's so much bad news, and I know it's bad. It's uhm… so, I protect myself I think [incomprehensible] I don't take it all in. When I come over a negative story about climate change and nature, I, I really do like a defence mechanism of, because I know it's so bad that… eh, it's not all negative of course. I try to focus on the possibilities of what we can do and, I can't, I can't dig it down into a, probably because it's not helpful for me. It's just like politics and Trump, you know, at some point you're like 'okay, he's crazy and he writes bad things, you don't have to read every tweet» (17).

Once one is satisfied that one has an adequate understanding of the issue, there seems to be a need to put down some boundaries, and that might involve avoiding news on climate change:

«I would not necessarily seek certain types of articles because I heard it before, maybe, or I know more or less the content and I know or I assume that it's not necessary for me, it wouldn't give me anything. I'm much more appealed to positive information. If there's another depressing news… they don't give me so much. I notice headlines but I rarely click on it. And I don't know… it's important for me more and more than what I do and what I spend time on is towards something and I don't see how anger can motivate me so much more» (1).

«I try to stay hopeful. I really do, I try to… Because it's so much on the media, and it's a negative focus, so I try sometimes to – what's the word – I have to… stop reading them. To focus on something else» (12).

«I mean, if it's really bad news, and sometimes, I actually have to shield myself off the news. Sometimes, I have to say, okay, that's it – now I've seen so much depressing news, that this is affecting my mood. And I can't do anything about it. So, I am not going to watch the news for a few days» (15).

Distancing and distraction

Another way in which one may seek to establish some balance in life, is by distancing or distracting oneself from the issue at times. In order to cope, one may place a barrier between oneself and the issue and all it entails: «How much can I care? It's like having a screen, I'm kind of protected» (13). The person may find that they sometimes have to take breaks from focusing on it or put it on hold, even though, or rather, *because* it keeps coming back:

«It's like, periods of time. Because after having a long period of really caring about it, and worrying and being afraid of it, then I distance myself a bit from it for a while, because it's… a bit tiring, in a way. And yeah, but then… yeah, it comes back» (31).

People will choose different lanes of distraction, depending upon what their interests are. Some spend time outdoors, some exercise, some listen to music, and some hang out with friends. One participant describes combining their interest in climate change with another interest, namely writing, by writing a book related to the subject: «That works for me, you know. Just canalising my emotions into something constructive» (18). Though sometimes it is necessary to take breaks, other times there is a need to be 'close' to it, to one's feelings:

«In a way, it's quite good to be in that space as well, like this sort of deep emotional acknowledgement of the crisis that we are in, to be like less alienated from it. I think it can be, can be good to just acknowledge these feelings that are always there in the background. And that you really strongly feel them» (21).

It comes back to finding a balance: «In time, I've become quite good at putting it away. Or making an active choice to not be in it so much but also accepting it when it is there» (25). Sometimes one may need to take a break from it all for a while, and other times one may need to acknowledge that it is there and let it be. One may move back and forth, needing to put some distance between oneself and the issue of climate change sometimes, and needing to feel close to it at other times.

An awareness of one's energy levels and one's needs, and how to, respectively, replenish and meet them, seems to be an essential feature of coping with this concern, especially considering the complexity and longevity of the issue. It may, however, be

somewhat ambiguous when one's personal needs outweigh the need to act on behalf of nature and the climate. This may be a struggle. The sense of duty to act and stay involved is strong. One may find oneself feeling the need to earn breaks: «When you have done all that and you have done what you can, then I think it's important to rest, and take a break from this» (10). Once again, balance may be key: «I wouldn't sacrifice everything for climate […] But there are a lot in between, between putting your life on a hold, and not doing anything. So, you have to do something. Unless you've given up. And that's not gonna work» (8).

Steering of focus

One may also cope by analysing one's emotions and asking oneself what is helpful and what is not, as a way to negotiate the different pulls. Taking an analytical approach to one's emotions may help one sort it out and put it away for some time:

«I feel that they are more so that I can see it with a more critical eye and sort of ask myself 'what is it about?', 'what can we do?', and 'what can we not do?' and I feel like every time I feel something about this now, I can approach it with much more sort of analytical way» (1).

«Worries are a waste of time. So when I worry, because I do, that's, you know, humans worry, I try to, I mean – if the worry gets really bad, I try to look at it, 'okay, is this helping? Is this helping, in any way?'. And if the answer is no, and it generally is, I try to put it away, and say, okay, this is unproductive. This doesn't really help the situation, put it away. Worry doesn't really help» (15).

One way of balancing and sorting out one's thoughts is through meditation:

«It takes a lot of energy. So I use a lot of time to meditate and focus and… to, ahh, what's the word? To sort out my thoughts! Because it gets kind of a chaos, and you can get into mess of difficult thoughts, so I have to just stop, meditate, and sort them out! Okay, this is this, this is negative, and this is positive. I have to do some active choices! Yes, and some days it's difficult to make good choices, of what to focus on. And some days it's… yes. Some days it's easy, and some days it's difficult» (12).

Meditation may help «contain» or «hold» (19) the experience – being present instead of avoiding it.

In a similar vein, the person may find that states of depressed mood, pessimism, and negativity are not helpful, for anyone or anything, and so they have to pull themselves out of these states:

«And the thing with sadness, for me, is that it goes very much up and down. There are some moments in the day when I think it's super pessimistic but it's not always because if I was always feeling like that, I would get depressed and paralysed and I would not do anything, I would just like, shut down and not do something useful» (13).

«I can't really stand being depressed for a long period of time, you know! I think, maybe, because I am thinking that this is a very unproductive feeling! I mean, it doesn't help. If I felt it helped the situation, in any way, I would probably stay there for longer. But it's just destructive. So, I am trying to find arguments, or find reasons for just getting my mood up, out of that hole, sort of» (15).

This may be linked to the way one may cope with anger by avoiding it or tampering it down as it is viewed as an unhelpful mode to be in. Participants seem to place some importance on the utility of different emotional states, and this may be linked to balance. One may find that in order to stay afloat, one needs to be aware so as not to tip over into a state too extreme.

Discussion

In my analysis, I employed a descriptive empirical phenomenological approach that resulted in the structure of five overarching themes: accepting the reality of climate change and adjusting hopes and plans accordingly, channelling emotions into climate action, navigating social dilemmas and seeking connectedness, developing new approaches to nature and life, and striving for balance in life. These five themes explicate the phenomenon of coping with emotional responses to climate change (as it is experienced by the participants of the current study). Below, I discuss these themes from the perspective of existential psychology complemented with findings from research in the positivist tradition. For each theme, I focus on specific findings that I found particularly relevant from the existential perspective and/or in light of behavioural engagement.

Accepting the reality of climate change and adjusting hopes and plans accordingly

The first theme describes how participants' come to terms with and adapt to a 'new' reality, that of climate change, and how they adjust their hopes and plans to it. The three processes of acceptance, negotiation of hope, and planning and preparation are often mentioned in relation to each other and are therefore grouped together. Here, I discuss the subthemes of acceptance and hope in light of the existential perspective and findings of previous research.

Acceptance

Participants of the current study speak of coping by accepting 'the reality of climate change' (its progression, consequences, inevitability, irreversibility etc.). In positive psychology, acceptance involves a readiness to face or deal with reality even if that reality is not the one one wanted or expected (Nakamura & Orth, 2005). It means surrendering oneself to what is and abandoning attempts to control what cannot be controlled. Acceptance may therefore be particularly relevant for coping with unchangeable or uncontrollable situations. Climate change may be viably considered unchangeable and uncontrollable to the individual, as 'solving' it is beyond the power of the individual. It represents a challenge that is characterised by a very high degree of complexity and uncertainty.

Through the lens of existential psychology, climate change may be viewed as bringing the participants of the current study in close contact with the givens of human existence, reminding them of their vulnerability. To Yalom (1980), acceptance of the givens of existence is an essential task of psychotherapy. Furthermore, denial will only intensify the pain and anxiety inextricably linked with encountering existential concerns. In a similar vein, May (1996) argued that existential anxiety is a natural part of life that, in itself, is not pathological. Rather, it is the failure to face this anxiety (e.g., denial) that may affect psychological wellbeing adversely.

In order to cope with the existential threat of climate change, participants of the current study speak of engaging in radical acceptance of the reality of the crisis. They describe experiencing that this acceptance helps them cope by providing a sense of peace. Their accounts indicate that acceptance helps calm the fundamental anxiety that climate change evokes, as accepting reality means they no longer have to engage themselves in resisting the inevitable. Accepting that «the train has left the station» (15) lessens the anxiety associated with the ultimate meaninglessness of trying to keep climate change from happening. To paraphrase one of the participants, one may find trying to control the future more stressful than accepting that some things are outside one's control (21). One may even go so far as to say that as more and more evidence of the severity of the situation is accumulated, fighting the reality of the crisis may be considered as futile as denying the facts of existence.

Having said that, acceptance is far from a straightforward process. Existentialists have noted that facing existential concerns involves paradox and tension (Spinelli, 2015; Wahl, 2003). In a similar vein, participants of the current study emphasise the uneasiness of acceptance and speak of unwillingness to accept the unacceptable.

In addition, acceptance has engendered some controversy and it has been tied to fatalism and resignation in other studies of coping with climate change (Homburg et al., 2007; Ojala, 2012b). It has been argued that accepting the situation as it is and agreeing that conditions cannot be changed is a form of resignation (Homburg et al., 2007). Another study suggested that accepting that the world might come to an end due to climate change is a sign of fatalism (Ojala, 2012b). In this regard, it might be helpful to consider different 'forms' of acceptance. The accounts of the present study indicate that participants (try to) accept the irrefutable facts of climate change but simultaneously continue to seek meaning and a change for the better. Alternatively, one could have resigned oneself to the reality of it and become passive, believing nothing can be done (e.g., hopelessness, meaninglessness). These responses may be considered comparable to Nakamura and Orth's (2005) concepts of 'active' and 'resigning' acceptance. Both involve dispensing of efforts to change what cannot be changed. However, the former allows for continued meaning-making in life, perhaps in other areas, while with the latter, passivity clouds one's life and loss of hope may ensue. In a selection of unchangeable situations, Nakamura and Orth (2005) found that active acceptance was positively related and resigning acceptance negatively related to mental health. Returning to the current study, one may speculate that acceptance may have different outcomes, depending upon how it combines with hope and meaning-making. One possible outcome may pertain to a sense of responsibility, and acceptance or rejection of responsibility.

From the phenomenological perspective, categorisation of acceptance may seem an oversimplification. Indeed, Nakamura and Orth (2005) acknowledged that it remains unknown whether active and resigning acceptance are consecutive or alternative reactions. Participants of the current study speak of feelings of peace and relief in relation to acceptance but also of having to fight pessimism and hopelessness, indicating that lived experience does not necessarily fit neatly into one of the two categories of acceptance but may for example alternate between them.

Participants of the current study also indicate that they cope by accepting their emotional responses to awareness of climate change. Acceptance of emotions involves a preparedness to stay in touch with and withstand uncomfortable emotional states without trying to change the state itself but rather one's reaction to it (Bishop, 2002). Participants of the current study speak of experiencing a need to «feel it» and «accept it» (16; «it» meaning the emotional responses to climate change), and of the value of acknowledging one's emotions (21). Alberts et al. (2012) found that acceptance of negative emotions required fewer regulatory resources than suppression, and that acceptance, while associated with a

drop in mood immediately after exposure to a stimulus meant to induce negative emotions, was associated with a re-stabilising of mood at a later time. Suppression, on the other hand, showed the opposite pattern, indicating a rebound effect, and that, in the long term, acceptance may be a more constructive coping strategy than suppression when it comes to effects on mood. One may thus hypothesise that over the long term, the participants of the present study may benefit from accepting their emotions.

Hope

The findings of the current study indicate that hoping as coping contains ambivalence, with hope being both questioned and endorsed by the participants. Hope, in general, has been defined as arising when a positive goal is experienced as being within reach (Snyder et al. 2002). It encompasses both cognitive and emotional components; it may be tied to future-oriented thoughts and positive expectations, as well as positive feelings regarding the future (McGeer, 2004). Furthermore, hope has been considered essential for motivation, providing the person with a drive to act even if there are no certainties (McGeer, 2004). Followingly, several authors have emphasised the importance of promoting hope in the context of climate change (Li & Monroe, 2018, 2019; Ojala, 2012b).

The accounts of the present study indicate that hope may be more ambiguous than it is sometimes thought to be. As noted, hope may become virtually meaningless, or even problematic, if not critically evaluated or if used as a last resort, grasping at straws when one has run out of arguments (i.e., «Well, don't you have hope?» [4]). As mentioned by participants, hope may become problematic if it hinders the person in accepting reality (4), if it is pacifying (17), or if it is a naïve or superficial hope (12). Furthermore, existing literature has problematised hope tied to or in the form of wishful thinking (McGeer, 2004) and compulsory optimism (Head & Harada, 2017). In the context of climate change, for example as a consequence of having accepted the reality of it, one may experience a need to re-evaluate the concept of hope. Participants of the current study state a need to specify what one hopes *for*. These results are similar to those of Ojala (2007), who noted that one strategy for activating hope is turning worst-case scenarios into something hopeful (e.g., hoping that nature will persevere and even thrive without human interference).

Such findings support a closer consideration of hope. The person may feel a need to abandon false hope or redefine or specify their hope (e.g., so that it fits with the reality one has accepted), in order to cope. One may find hope has lost some of its purpose and meaning and, instead, become something that one needs to disentangle oneself from as a step in one's

coping process. As noted, there may be an important difference between giving up (false or superficial) hope and losing hope. Here, parallels to Nakamura and Orth's (2005) concept of active and resigning acceptance may be drawn. Giving up (false or superficial) hope may correspond to abandoning attempts at changing the unchangeable, whereas losing hope may involve abandoning attempts altogether.

The participants of the current study who state a need for hope (7) and ask what one is without it (10) may be understood to be referring to a more basic idea of the concept in which the alternative would be to give up altogether. The findings of the present study may be cautiously interpreted to indicate that meanings of hope are linked to efforts to sustain engagement with the issue. Hope may be understood as a stopper for acceptance and active engagement on the premises of reality, or it may be understood in a more basic sense as a necessary force enabling one to keep going and remain engaged.

Previous studies indicate it is important to consider how hope is evoked or which function it serves. Ojala (2012b) found that, in a sample of young people, hope was primarily induced via meaning-focused coping, which has been linked to environmental engagement and psychological wellbeing among young people (Ojala, 2012a; 2013). However, Ojala (2012b) also found that, in a few cases, hope was evoked by de-emphasising the severity of climate change. This strategy may serve an emotion-focused function but has been found to impact environmental engagement negatively (Ojala, 2012c). Indeed, van Zomeren et al. (2019) found that the strategy of hoping as coping (hoping for climate change to change for the better) seems to help people regulate their emotions but not motivate pro-environmental (or, in this case, collective) action.

In conclusion, hope may be induced in different ways, some of which are less constructive when it comes to climate change mitigation, yet they may still benefit individual coping. It then becomes important to reflect on what the aim of coping is. The common understanding in psychology is that coping serves the function of promoting mental health and regulating emotions in encounters with stressors (Lazarus & Folkman, 1984). In the context of climate change, engagement with the issue may also be seen as crucial for wellbeing in the longer run. Folkman and Moskowitz (2004) noted the complications related to attempting to rate different coping strategies, though many studies of coping can be said to be motivated by wishes to be able to say something about how people best can cope with a certain problem. Deciding the effectiveness of different strategies is not the aim of this paper. Rather, the purpose of the analysis is to describe lived experiences of coping in the context of climate change.

That said, in the existential school of psychotherapy, living in line with one's values and staying engaged with the world is seen as a crucial element of active meaning-making and hence psychological wellbeing (May, 1996; Yalom, 1980). These are markers of an authentic life, as the existential perspective sees it. Resisting reality, on the other hand, is considered inauthentic in the sense that it entails living life on false premises. Coping by de-emphasising the severity of climate change, involving an attitude that does not correspond with the reality of the crisis, may therefore be viewed as inauthentic. The participants of the current study, who report a firm will to stay engaged but also striving for peace and balance, may be seen as actively navigating the unobvious meanings of hope in an attempt to remain authentic in their coping with the challenging reality of climate change.

Channelling emotions into climate action

The second theme describes coping by taking action and negotiating responsibility to act. Two 'forms' of climate action are described: individual and collective action. In the following, I discuss the complications associated with individual responsibility and suggest some alternative perspectives on climate action as a coping strategy.

Participants of the current study describe coping by channelling concern and emotions into individual and collective action. Their accounts indicate taking action may help them cope by evoking a sense that they are doing what they can or doing their part. This is in agreement with Doherty (2015), who emphasised that working to mitigate climate change may have intrinsic benefits such as a sense of competence and participation. Also, previous research has found that engagement in mitigation behaviours (e.g., recycling, using less water, using public transport) may serve as a coping strategy in itself, in that it appeared to help people manage climate change distress (Bradley et al., 2014). Moreover, active engagement in addressing climate change has been proposed to be not only a means of coping but also of adaptation or adjustment to a new way of life (Clayton, 2020).

However, as indicated by the findings of the current study, individual focus may involve feelings of guilt and shame for not doing enough or for doing the «wrong» thing. Ágoston et al. (2022) defined 'eco-guilt' as involving a realisation that one has violated personal or social standards of behaviour (in relation to ecology). In their study with a climate-sensitive sample, they identified eight categories of eco-guilt: prophetic individual responsibility; self-criticism, self-examination, self-blame; guilt/individual responsibility criticism; dissatisfaction with one's actions; feeling guilty about one's past; system maintenance guilt; dilemma of harm; and guilt for one's existence. Some of these aspects of

guilt may be recognised in the accounts of the participants of the current study, especially the ones pertaining to guilt and rumination about one's own actions, as well as guilt about one's privileges and participation in a system that is contributing to climate change.

In addition, knowledge of the limited impact of individual behaviour may make it seem virtually meaningless and make it hard to achieve a sense of satisfaction from it. Participants of the present study describe feeling guilty and being unable to relax when they think they have behaved in harmful ways, despite knowing individual choices make little difference and cannot solve the problem on its own (10). Moreover, they indicate their individual behaviour is rooted in a wish to avoid guilt more than a belief that such behaviour represents a meaningful contribution to the cause (1). Ágoston et al. (2022) found that while some participants reported satisfaction with their everyday actions, others reported dissatisfaction and devalued the same actions. Furthermore, their findings indicated that participants who had a more local perspective were better able to accept their own limitations and were less dissatisfied than participants whose perspective was more global. Accounts of the present study indicate that lived experience of individual actions may be ambivalent. As an example, one participant describes finding a bit of meaning in the little things they do but also refer to individual actions as «selfish, yet not selfish» (31) because they clean one's conscience.

As described, participants seem to endure a paradoxical double negative effect from individual level actions aimed at mitigating climate change. The knowledge that individual behaviours have limited impact because the problem is so vast, may result in feelings of powerlessness but does not necessarily thwart feelings of guilt about behaviours that are perceived as harmful or for not doing enough. This could be due to a (heightened) sense of personal responsibility. The notion that it does not make much difference whether one personally recycles every piece of one's garbage or not, appears to be outweighed by the feeling of responsibility that continuously influences one's behavioural choices. This responsibility may become a heavy weight on the person's shoulders. Even though making environmentally sound choices in everyday life may help them feel they are doing something or doing what they can, this strategy seems a fraught one, as the awareness of the limited effect of individual behaviours may undermine these feelings.

Relatedly, Ojala (2007) noted that in stressful situations that are more or less unchangeable to the individual, problem-focused coping should be complemented by meaning-focused coping, this in order to maintain psychological wellbeing. Mah et al. (2020) argued that communication about climate change needs to be balanced, neither removing nor

overemphasising individual responsibility. In their view, communicators should promote a shared sense of responsibility in communities, connecting people so that they may cope together. This is in line with findings of the current study indicating that collective action (e.g., being part of an environmental organisation) engendered helpful effects for coping, mainly through the powerful effects of community and support and understanding from likeminded people. Similarly, Ágoston et al. (2022) found that climate-sensitive people coped (with 'eco-anxiety', 'eco-grief', and 'eco-guilt') by joining communities such as self-organising eco-groups and activist groups. In these groups, participants helped each other foster pro-environmental behaviour, shared ideas, and adopted the role of activists. The communities provided the participants with a sense of belonging, as well as emotional support.

Coping through climate action holds great potential as it may benefit both psychological wellbeing and mitigation of climate change. The current study and others (Mah et al., 2020) do however encourage caution when it comes to individual focus. More focus on collective action and how one may contribute to a collective effort, may lessen some of the burden on individuals. Also, the focus on individual behaviour should not take away from the call for societal actors to step up to the challenge and own up to their own responsibilities (Bamberg et al., 2021; Wallis et al., 2021).

As noted, the existential given of freedom means that people are free to create their own lives and, followingly, are responsible for their own actions. Philosopher Hans Jonas (1984) argued that this responsibility extends to future generations, and that, as capable of being responsible, humans also have a responsibility towards nature and other living creatures. Participants of the current study seem to accept this responsibility and take it seriously in that they strive to contribute on a personal level. However, in case of a global issue such as climate change, the person must also acknowledge that they cannot solve this on their own; they are not unaffected by the world around them; they depend upon others. This is what Spinelli (2015) referred to as existential relatedness.

Navigating social dilemmas and seeking connectedness

The third theme describes social dimensions of coping. Participants describe navigating social norms of climate change discourse, managing anger and ascription of blame, seeking connections to (likeminded) others, and negotiating their connection to society. Here, I discuss these results in light of the concepts of existential relatedness and connectedness, as well as findings from other studies.

Relatedness

Relatedness may be interpreted to imply co-dependence (Budziszewska & Jonsson, 2021). As an individual, one is not separate from but belongs to the world; one is part of a co-dependence with others and the world. Importantly, the experience of relatedness contains ambivalence and tension as individuals may accept or reject this co-dependence (Budziszewska & Jonsson, 2021). Rejection may entail disconnection or detachment. Participants of the current study speak of wishing to distance themselves from the ways of general society, at least the consumer side of it, yet they acknowledge that in order to influence it they need to stay part of it, and they problematise escapist solutions such as leaving civilisation behind. They acknowledge that social isolation is not compatible with political engagement (19) and report not wanting to run away from the problem (5). They may be seen as seeking ways of 'being' in the world as it is, which in turn may be seen as acceptance of relatedness. Coping then becomes a question of how to reconcile this acceptance of one's relatedness and belonging to a society that has caused a global environmental crisis with one's beliefs, values, and moral principles.

Budziszewska and Jonsson (2021) viewed climate anxiety in light of existence themes. In their qualitative research, they found that the principle of relatedness had a big presence in the anxiety, and, more specifically, that «the loss of, the lack of, or the longing for relatedness with others and the world» (p. 15) was a common thread in their interviews. Participants of the current study may be understood to be navigating similar challenges. Their accounts indicate that they cope by seeking social connections where they may be found. Whilst existential isolation is a given of life that the person must come to terms with, connections to others may, nonetheless, be a comfort (Yalom & Josselson, 2014).

Connectedness

The third theme of the current study may be said to capture the participants' sense of connectedness (or disconnectedness) to (or from) others and the world. Connectedness may be defined as a state occurring «when a person is actively involved with another person, object, group, or environment, and that involvement promotes a sense of comfort, wellbeing, and anxiety-reduction» (Hagerty et al., 1993, p. 293). Relatedly, connectedness has been suggested as a core factor and key mediator of psychological wellbeing (Carhart-Harris et al., 2018).

Carhart-Harris et al. (2018) described connectedness in terms of three separate aspects: connectedness to (a) self, (b) others, and (c) the world in general. From the phenomenological

and existential perspective, referring to them as separate entities may appear dualistic. However, Carhart-Harris et al. (2018) suggested that connectedness to others and the world in general follows from connectedness to self. They proposed that connection to self provides a foundation for connection to others and the world in general. One may infer that connection to self, others, and the world in general interact and overlap in other ways as well. Categorisation helps understanding but it is important to remember that these aspects of connectedness do not exist in isolation from each other. The entanglement of self, others, and the world may be seen as a consequence of relatedness.

Participants of the present study describe feeling disconnected and alienated from consumer society and parts of society that are perceived as careless when it comes to climate change. They speak of having trouble connecting to others who go about their lives seemingly unaffected by the climate crisis (10) and describe feeling lonely (6) and isolated (17). They describe experiences of not being heard or taken seriously by others when addressing the issue and of being worried about burdening others with their concerns. Relatedly, in their study with 10,000 young people from 10 countries, Hickman et al. (2021) found that nearly half of respondents that reported having talked to others about climate change, stated that they had been ignored or dismissed when doing so. Moreover, feelings of disconnection, loneliness, and isolation may be added to by experiences that climate change is a controversial subject in some social circles. Participants of the present study describe avoiding the topic in social settings wherein they run the risk of being perceived as a «mood killer» (15) for bringing it up. This strategy may be considered a form of conformity to social norms regarding the issue. In a sense, one may say that they (temporarily) disconnect themselves from their beliefs and values, and, in extension, their selves, silencing themselves on a topic that takes up much of their life, in order to gain or maintain connectedness to others.

Other authors have also noted the social polarisation that characterises climate change discourse (Geiger & Swim, 2016). This polarisation may prevent people from expressing their feelings about the issue for fear of provoking disapproval or conflict. The danger of this self-silencing is that it may weaken social connections that may otherwise have represented a powerful source of resilience (Clayton, 2020). Additionally, Ojala and Bengtsson (2019) found that young people's coping strategies concerning climate change may be related to communication patterns with parents and friends. Solution-oriented and supportive patterns were related to problem-focused and meaning-focused coping, whereas dismissive and 'doom-and-gloom'-oriented patterns was related to de-emphasising the threat of climate

change. In summary, the controversy surrounding climate change may result in an 'additional' problem of having to cope with experiences of social isolation, as well as remove or weaken a viable means of coping, namely coping through social connections.

As connections to others may not always be readily available to participants, the connections that they do find seem to bear special significance and be appreciated and valued. The most meaningful connections are perhaps the ones that allow them to express themselves freely and stay in contact with their beliefs and values (their selves). As described, participants (try to) accept the reality of climate change and may question hope. Interactions where they do not have to pretend to be more optimistic than they are may therefore be valued. Participants' accounts indicate that being able to talk about the issue (14) and share one's feelings around it (21), helps them cope. They speak of adjusting to social norms but also of gravitating towards people of similar mindsets. The findings of the present study indicate that engaging in collective action, for example being part of an environmental organisation, may provide opportunities to meet and connect with likeminded people. Similarly, Ágoston et al. (2022) found that environmental groups provided members with opportunities to ventilate their bottled-up negative emotions, as well as form new friendships away from social environments insensitive to climate change.

Moreover, participants of the present study report efforts to refrain from anger towards and blaming specific persons or groups (e.g., the government) for climate change or lack of response. One may speculate that this may, in part, be motivated by a view that anger and blaming will only serve to expand the divide they experience between themselves and others. This, again, may in part be influenced by cultural norms concerning emotions such as anger. In their study of emotion management among climate scientists, Head and Harada (2017) noted that cultural acceptance, or rather suppression, of painful emotions in Western societies may come to affect expression of emotions in relation to climate change. Furthermore, Kleres and Wettergren (2017) interviewed climate activists from different parts of the world and found support for a distinction between participants from the Global North (wealthy developed countries) and participants from southern nations. Northern narratives indicated anger was treated with caution and as an emotion to be pacified or transformed. Also, blaming (ascription of guilt) was largely rejected by participants from the Global North. In contrast, southern activists appeared to engage in angry ascription of responsibility to the North. These findings indicate expression of anger and ascription of blame as coping mechanisms may be influenced by cultural differences and differences in sense of responsibility held by one's culture. The sample of the current study belongs to the group of wealthy developed nations,

and their responses concerning anger and blaming appear to correspond to those of the northern activists of Kleres and Wettergren's (2017) study.

Developing new approaches to nature and life

The fourth theme describes coping by developing new perspectives on nature and life and drawing on (newly developed) values and meanings. These findings are here discussed in light of other studies of connectedness to nature and existential meaning.

Connectedness to nature

Participants of the present study describe coping through connecting to nature. In the conceptualisation of Carhart-Harris et al. (2018), connectedness to nature is one aspect of connectedness to the world. Nature connectedness has been defined as «an individual's trait level of feeling emotionally connected to the natural world» (Cervinka et al., 2012, p. 380). It refers to a person's subjective sense of their relationship with nature (Pritchard et al., 2019). The accounts of the current study indicate that the knowledge of a human-made environmental crisis may lead to a development of more pro-environmental values, as well as a newfound or renewed appreciation and respect for nature. One participant describes a spontaneous feeling of joy just looking at flowers (16) and another has stopped killing flies, believing human life is not above the fly's (24). Participants' accounts indicate connectedness to nature may help them cope, e.g., by making nature experiences more meaningful and valued. Being in or feeling close to nature may bring some solace and peace, as well as remind the person what they are fighting for (what their engagement with climate change is about).

Connectedness to nature has been associated with greater *eudaimonic wellbeing* (Martin et al., 2020; Pritchard et al., 2019), a conceptualisation of wellbeing that emphasises psychological functioning, self-realisation, and living in accordance with one's true self and values ('in contrast to' hedonic wellbeing; Pritchard et al., 2019). Pritchard et al. (2019) found that connectedness to nature was positively related to eudaimonic wellbeing and, in particular, (self-reported) personal growth. This may be understood as indicative of a link between perspectives on nature and perspectives on life. Martin et al. (2020) also found a positive relationship between nature connectedness and eudaimonic wellbeing. In addition, connectedness to nature was positively related to pro-environmental behaviour, indicating that it may benefit both human and planetary health.

The accounts of the present study include mentions of relying on a belief that death is not the end but the beginning of something new, as one's body will become part of nature (4),

and of experiences of «being in the middle of one-ness» (16) while sitting by the sea. As such, participants' nature connectedness may be considered to have a spiritual component. Spirituality can be defined as «an individual's inner experience and/or belief system, that gives meaning to existence, and subsequently allows one to transcend beyond the present context» (Kamitsis & Francis, 2013, p. 137). In agreement with the findings of the current study, Kamitsis and Francis (2013) found support for a positive association between connectedness to nature and psychological wellbeing, and also that spirituality mediated the association.

Participants of the current study criticise the view of humans as separate from, or even superior to, nature. They emphasise symbiosis and co-dependence with nature. As such, they may be considered to disapprove of negation of relatedness with nature and, instead, embrace relatedness. People may reject or accept relatedness to nature, similarly to how they may reject or accept relatedness to others. The modern world can be said to have lost touch with nature (Mayer & Frantz, 2004). It may be described as emphasising other values than relatedness (e.g., individuality; Brownhill et al., 2012). However, as climate change may be considered an indication of, it has not benefited neither humans nor nature in the long term. Participants mention that separation of humans and nature, which may be interpreted as rejection of nature relatedness, may be an important, if not deciding, factor in how the world ended up in an environmental crisis (16), and that a lasting solution may lie in their reunion (18), which may be understood as acceptance of nature relatedness.

Participants of the current study speak of seeking refuge in natural environments and of gaining a spiritual connection to nature. This connection may be a consolation but also an impediment because it means one is vulnerable and nature degradation is felt more immediately than it might otherwise have. As an example, one participant agrees their connection to nature may help them cope but also says it means they are hurt when nature is hurt (4). This speaks to the tension inevitably associated with (accepting) existential relatedness. Budziszewska and Jonsson (2021) also emphasised the fragility associated with realising and acknowledging the massive planetary threat of climate change and, simultaneously, that humans and nature share a common fate.

Existential meaning

Acknowledging the existential threat of climate change can be said to almost force new outlooks on life. To paraphrase one participant who describes going through a period of «existential grief» (16), one may come to appreciate life on a new level. Participants speak of

confronting mortality – «if you made choice to live […] then you just have to make the best of it» (10) and «if you are not prepared to die, you are not prepared to live» (19) – this in line with the existential approach which advocates that the existential given of mortality must be accepted. That said, accepting the reality of climate change and facing the reminders of mortality that it imposes on the person, is not a simple challenge. Participants report efforts to be present, appreciating the here and now. They speak of prioritising their time differently, according to their values. They can be said to defy conformity and convention in that they are questioning modern ways of life that others may take for granted. At times, they self-silence in order to avoid social sanctions, and, as such, can be said to (temporarily) disconnect themselves from their selves. Simultaneously, their worry about climate change can be said to have brought them closer to their values and beliefs (i.e., their selves). Participants express wishes to lead authentic lives of meaning. This focus, drawing on meaning, appears to help them cope.

Having meaning in life, that is, a sense that one's life in this world has meaning, has been proposed to underlie psychological wellbeing (Kesebir & Pyszczynski, 2014). In order to achieve meaning, one may seek to carve out an identity and a significance in the world. One may seek symbolic immortality, i.e., a sense that one is part of something bigger than oneself, something that will withstand the toll of time that oneself (one's body) will not (Lifton, 1979). Kesebir and Pyszczynski (2014) suggested that symbolic immortality may be most readily found in areas that transcend the self, such as relationships, religion, science, art, and so on. This notion that the self may not be a fitting place to look for meaning may be viewed in light of relatedness with others and the world. Trying to find meaning in the self may be seen as a rejection of relatedness. In order to find meaning (and cope) one must accept one's relatedness with others and the world, and, in extension, accept one's vulnerability.

As noted, Folkman and Moskowitz (2000, 2007) and Folkman (2008) introduced a form of coping that revolves specifically around meaning, namely meaning-focused coping. In the context of coping with climate change, Ojala (2012a, 2013) has consistently found meaning-focused coping to promote wellbeing and pro-environmental behaviour among young people. Debats et al. (1995) asked participants about situations in or periods of their lives when they experienced their lives as meaningful and when they did not. They found that a sense of meaning was often mentioned in relation to a crisis, a response that the authors described as «meaning through coping with crisis» (p. 363). About 10% of their sample reported finding meaning in life as a consequence of coping with a crisis.

Participants of the current study describe trying to find meaning in the reality of climate change. They report approaching life differently as a consequence of the crisis. It has brought them back to meaning, purpose, and values – «back to life» (18). The question then becomes, 'what is a meaningful life?'. Participants do not believe consumption will make them feel happy and fulfilled. They now wish to appreciate the here and now, not concern themselves so much with the future, and prioritise their time according to what is truly important to them (e.g., valued relationships). They connect to the cause of mitigating climate change in different ways, a cause that transcends themselves and their immediate surroundings. In a sense, this, in itself, may be a form of coping. Environmental engagement and working with others to address the problem may lead to an enhanced sense of meaning (Clayton, 2018, 2020). The participants of the current study may be seen as finding «meaning through coping with crisis» (Debats et al., 1995, p. 363). Connecting to the cause of climate change mitigation may bring to their lives a new and/or greater purpose compared to the time before they became engaged with the issue. It provides them with an opportunity to leave their mark, to contribute to a cause that is much larger than themselves, that is, to move towards achieving symbolic immortality.

Striving for balance in life

The final theme encompasses coping strategies such as regulating information intake so as to not be overwhelmed by (bad) news, distancing and distracting oneself from the issue at times, and steering one's focus so as to be able to pull oneself out of states of negativity and pessimism. The thread throughout the theme is coping by seeking balance, e.g., in terms of balance between engagement with the issue and seeing to one's other needs and interests, and balance as in a balanced emotional response. Below, I discuss these results in relation to previous research and its varying perspectives on such strategies.

Balance

Participants of the present study emphasise the importance of finding balance. They describe asking themselves what is helpful (for coping) and what is not. They reflect on the risks related to pouring all their time and energy into their engagement, such as risk of burnout and risk of losing motivation. Interviewing young environmental and global justice activists, Ojala (2007) reported similar findings to that of the present study. The author found that the young activists struggled with the dilemma of balancing between responsibility for oneself (one's own needs) and responsibility for the environment or society, as well as that of staying optimistic, not succumbing to pessimism and feelings of meaninglessness. The

findings indicated the participants coped with these concerns through an inner dialogue in which they negotiated their responsibilities. This appeared to help them maintain their engagement despite imperfections.

Overall, these findings indicate that there is an experienced tension between active engagement with climate change and personal needs and responsibilities. The two are perceived as being somewhat at odds with one another, hence, the need to find a balance point. In the existential perspective, existential anxiety may motivate actions and experiences aimed at restoring balance, and thus the experienced need to find balance that participants describe may be understood as motivated by emotional responses to climate change. However, one may also speculate that this need may, at least in part, be attributable to the structure of society, a structure that makes engagement with the issue, for example in the form of pro-environmental behaviour, a time and energy consuming endeavour. In the words of one of the participants of the present study, one may experience oneself as being «trapped by the system» (18). Wallis et al. (2021) argued that psychology may have an important role to play in providing insights into how people may cope with a socioecological crisis by developing ecological lifestyles and identities, in spite of being confined to the present unsustainable sociotechnical systems.

Distancing

Participants of the present study describe a need to distance themselves from the issue at times, for example by taking breaks or distracting themselves. They report finding ways of regulating their exposure to information about climate change, e.g., by avoiding news about it or focusing on hopeful messages, and of (literally or conceptually) putting the issue away for a period of time. Also, cultivating other interests and activities seems to help them cope. In general, Folkman and Moskowitz (2004) noted that distancing (e.g., taking breaks from thinking about a problem) may be an effective coping strategy when the situation is more or less unchangeable. In the context of coping with climate change, Clayton (2020) proposed that people who are experiencing severe distress due to climate change awareness may benefit from distancing strategies such as paying less attention to media coverage of the issue, steering their focus towards more immediate concerns, and seeking out alternative sources of activity and meaning. However, other authors have been more critical of similar means of coping. Ágoston and colleagues (2022) identified «problem avoidance/denial/wishful thinking» (p. 10) as one cluster of strategies employed by participants in relation to coping with eco-anxiety, eco-grief, and eco-guilt. These strategies involved averting focus from

climate change, for example by avoiding news about the issue, focusing on more pleasant activities such as sports and arts, or engaging in pleasant fantasies about how people can contribute to a better world. The authors noted that the strategies helped participants cope with guilt and anxiety but maintained that they were less adaptive means to this end, as they may avert focus from eco-friendly behaviour. That said, whether this is the case (or not) remains to be shown.

From the findings of the present study, one may infer that coping with the reality of climate change does not mean constantly dwelling on the facts of the crisis. It may sooner mean learning to come to terms with and finding a way to live with the knowledge, and one aspect of this may be seeking balance by steering one's focus elsewhere at times.

Implications

The findings of the present study indicate that hope, while described as a motivation and even lifeline by some, has problematic connotations for others. Followingly, I argue that before researchers and practitioners set about designing interventions meant to instil hope in the context of climate change, one should consider that hope may have more than one meaning. Confronted with the existential and ontological challenge of living with climate change, singling out one (or a few) concept(s) for promoting coping, adaptation, engagement, and so on, becomes, in my opinion, too narrow a focus. Verlie (2019) highlighted the enormity of the task now and ahead, of developing not only new ways of life but also new understandings of «what life is, what it means to live, and how to live well» (p. 759). I echo the view of the author, that coping with climate change must be recognised as the complex and challenging task that it is. Though hope holds promise for motivating people to try and endure, my view is that interventions should consider the ambiguousness and paradox in lived experience, of hope and of other emotional responses to climate change.

Tempting as it may be, I remain cautious with regard to attempts at indicating how constructive or effective specific coping strategies are. Though many studies of coping appear to be underpinned by such motivations, and understandably so, the exercise of evaluating different strategies continues to be a complicated one, in my opinion. That said, the existential perspective asks people not to dwell on the very existence of adverse or even unwanted emotions but rather come to terms with their being and question, instead, how one may deal (cope) with them (Spinelli, 2015). In the existential view, humans are free and hence responsible for their actions. Life is inherently meaningless so one must find ways to create meaning oneself. In this regard, the existential perspective can be seen as giving some

pointers as to how people may deal with adversity, that is, by accepting the basic premises of human existence but remaining engaged with the world and continuing to try and create meaning. This is readily applicable to the context of coping with emotional responses to climate change, and, indeed, participants of the current study describe ongoing processes of learning to accept the reality of climate change, negotiating responsibility to act, finding new meanings in and of nature and life, and regulating connections to others and the issue in order to remain engaged with the world.

The results of the current study indicate that social 'spaces', in which one may put words to one's concern and emotional responses and be heard, may be important for coping. The participants describe negotiating social norms, (at times) self-silencing, and valuing opportunities to express their emotions and interactions of mutual respect. Presently, climate change appears to be a polarising subject and participants report reluctance to bring it up in some contexts. More openness about climate change and emotional responses to it, may benefit coping in several ways. Sharing of concerns and emotions may connect people in the face of this global crisis. Also, openness may promote resilience and advocacy in that it may foster a freer flow of ideas and creativity with regards to how people and societies may respond to this threat. Providing such a space for expressing one's emotions freely may be considered a public responsibility, but psychology is, in my view, particularly well-positioned to do so. A serious consideration of climate change that does not reduce emotional responses to hysteria or pathology, is necessary for coping on both individual and societal levels.

From the existential perspective, adverse or even unwanted emotions like anxiety are nonetheless valuable. The, at times intense, emotional responses that participants of the present study describe, urge them to act and experience. They engage with the issue, for example, through climate action or approaching nature and/or life with a clearer emphasis on values and meaning. It is, however, also important to remember that the emotional responses and experiences of (a need to engage in) coping, convey a story of the current state of the world. Sayer (2011) emphasised that people's concerns are not only about individual experiences but also pertain to what is happening in society and may serve as a drive for debate and change. The experience of a need to find a balance between engagement with climate change and one's life (otherwise), may be understood as implying that the two are somewhat at odds, and this may be partly attributable to the structure of society. There is an emphasis on individual responsibility to mitigate climate change but also societal structures and systems that make leading a pro-environmental life a complicated endeavour. The present study emphasises the risks contained in individual level focus and responsibility in the face of

a global crisis. One way to counteract these effects is to help people to come together to cope together. In the existential view, individuals are related to others and the world, and acknowledgement of relatedness may be key in how humanity responds to the challenge of climate change. Mitigating climate change requires a collective effort and acknowledging relatedness to others, nature, and the world in general may be a good place to start.

Future research

As adverse psychological impacts of climate change are prevalent, profound, and cumulative, there is a critical need for more studies about emotional phenomena, like coping, in relation to climate change (Ojala et al., 2021). Also, as climate change is both progressing and experienced diversely in different populations and parts of the world, future research should explore coping with climate change in different contexts. Though there are some exceptions (Ogunbode et al., 2021), more studies with people living in other parts of the world than Northern Europe, Northern America, and Australia are needed. It may also be important to investigate emotional and coping responses in a wide variety of populations in terms of age, socioeconomic status, level of concern about climate change, etc. Also, to my knowledge, most studies about coping with climate change have been quantitative, and several, though not all, have been inspired or guided by already existing theory or measures of coping. Therefore, more exploratory and in-depth qualitative studies may be useful for gaining more insight into the nuances, paradoxes, and ambiguousness of coping and living in the era of climate change. Such studies may further the understanding of the complex experiences involved in coping processes in this context and reflect experiences that people may relate to or empathise with. There is a need to communicate the findings of studies of emotional dimensions of climate change to societal actors like actors responsible for implementing interventions to help people cope with climate change (Ojala et al., 2021).

Strengths and limitations

The present study is exploratory, based on semi-structured interviews that allowed for exploration of spontaneous topics during interviews and employing a phenomenological approach to analysis that facilitates openness to what is in the material, also the more unobvious meanings. As such, it can be said to provide a fresh and inclusive perspective on coping with emotional responses to climate change, a relatively unexplored phenomenon. It can be said to broaden and add to the findings of other studies of coping in this context, for example regarding strategies such as coping by taking action and connecting to others, and also contribute new insights into strategies pertaining to acceptance, hope, meaning,

existential concerns, and so on, emphasising the ambivalence and paradox contained in the experiences.

There are several limitations of this study that are worth mentioning. For one, it was conducted in a geographically and economically privileged context, where awareness of climate change is relatively high and information about the issue is readily available to the general public. Also, most participants had an academic (university) degree. Though participants were not explicitly asked about religiousness, as a whole, Norway is a largely secularised country. In summary, the lived experiences of persons living in other cultures (e.g., more collective or religious ones, less economically affluent ones) could be very different.

One danger associated with studies like the present study, conducted in a privileged context, is that they may steal focus from less privileged parts of the world that are already being directly impacted by climate change (Ray, 2021). Climate change itself is very much a social justice problem, with low-income countries and disadvantaged populations in high-income countries being disproportionately affected by impacts of climate change (Levy & Patz, 2015), and so, conducting a study of coping with climate change in a highly privileged and resilient context is somewhat paradoxical. All must take care not to exacerbate existing social injustices, and that very much includes researchers and research as well. Nonetheless, as already noted, studies on privileged populations may be considered important due to evidence of psychological impacts in such populations, as well as their considerable contribution to the progression of climate change but also their power to influence politics and mitigation.

As a qualitative study with a fairly small sample of participants, selected because of their concern about climate change, the generalisability of the findings is limited. As descriptive empirical phenomenology aims to describe phenomena before individual or subjective experience, my hope is that the findings may nonetheless provide some insight into the phenomenon of coping with climate change emotions in a privileged and climate resilient context. The experiences that are described are simultaneously very much situated, both limited and freed by the context of globalised society and culture, and timeless in that they pertain to basic questions that people have been asking since the beginning of time, of which climate change may be considered to actualise in several ways.

The challenges associated with adopting the phenomenological attitude and practicing reflexivity are discussed in more detail in the method section. However, it is worth mentioning again that these exercises are not easy, and my preconceptions of the issue,

society, etc., as well as knowledge of existing coping literature, may most likely be reflected in the analysis and findings. Though objectivity is not the goal of the phenomenological attitude, it is likely that some understandings and meanings were more available and others more unavailable to me, being who I am, with the background I have.

Conclusion

The growing evidence of psychological impacts of climate change warrants an exploration of how people experiencing these impacts cope with them. The phenomenon of coping with emotional responses to climate change, in a sample of 33 Norwegians who self-identified as concerned about climate change, was found to be explicated by the five overarching themes of: accepting the reality of climate change and adjusting hopes and plans accordingly, channelling emotions into climate action, navigating social dilemmas and seeking connectedness, developing new approaches to nature and life, and striving for balance in life. In summary, coping is rarely straightforward. The issue of climate change may be tied to existential concerns, and the lived experience of the participants is oftentimes described as ambivalent and paradoxical. In line with the existential perspective, participants report trying to accept reality, taking responsibility (in relation to both the cause and their lives), acknowledging relatedness, and seeking meaning and authenticity. Finally, the findings of the present study point to a need for more openness and inclusiveness in discourse and debate about climate change and emotional responses to climate change. The study also highlights possible risks associated with individualisation of responsibility and calls for more emphasis on collective action and necessary systemic and structural changes.

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Appendix

Appendix A: Approval from NSD

Vurdering

Dato
13.11.2020

Type
Standard

Referansenummer
206971

Prosjekttittel
Kartlegging av bekymring for klimaendringer in Norge

Behandlingsansvarlig institusjon
Norges teknisk-naturvitenskapelige universitet / Fakultet for samfunns- og utdanningsvitenskap (SU) / Institutt for psykologi

Prosjektansvarlig
Christian Klöckner

Prosjektperiode
30.03.2020 - 30.06.2022

Meldeskjema ↗

Kommentar
NSD har vurdert endringen registrert 13.11.2020.

Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet med vedlegg den 13.11.2020. Behandlingen kan fortsette.

Endringene gjelder at det nå er lagt til "Eksterne medarbeidere/samarbeidspartnere innenfor EU/EØS" på siden behandling.

Godkjenningen fra Regionale komiteer for medisinsk og helsefaglig forskningsetikk (REK) er også lagt til. Prosjektet er vurdert og godkjent av REK etter helseforskningsloven (hfl.) § 10 (REK sin ref: 89334).

Jmf vilkår satt av REK skal data også oppbevares 5 år etter prosjektslutt.

OPPFØLGING AV PROSJEKTET
NSD vil følge opp underveis (hvert annet år) og ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet/pågår i tråd med den behandlingen som er dokumentert.

Lykke til videre med prosjektet!

Kontaktperson hos NSD: Jørgen Wincentsen

Tlf. Personverntjenester: 55 58 21 17 (tast 1)

Appendix B: Interview guide

Interview guide

1. When you think about climate change, what do you feel?
[After the general spontaneous answer of the interviewee ends and they have nothing to add, introduce the materials with emotional vocabulary - the *Wheel of emotions* and the *List of Emotions* (both found below). Ask if any of the emotion words are relevant for what the interviewee feels, then deepen their response asking about the context, intensity, and examples of when they experienced such emotions].

2. How do these emotions affect your day-to-day life? How has life changed for you as a result of experiencing these emotions?

3. Do you ever express the emotions that you feel about climate change? How?

4. When you think about climate change, what are the main worries for you? How do you see the future from here (in 5, 10, 50 years)?

5. What things, situations trigger your stronger emotions about climate change?

6. What is your approach to staying informed about climate change? Do you strive to obtain more information about climate change or would you rather say that you avoid learning more about this issue?

7. Are you involved in climate action, "climate compatible behaviours"? What do you do? How does it make you feel?

8. Do you take climate change into consideration when planning for the future? What are your plans for the future when climate change unfolds?

9. What are the things that have helped you with your emotions? Think about the situation when you felt very strong emotions about climate change; describe what helped you cope with them? Are there any other things you do that help you ease your emotions?

10. Would you like to add something about what you feel about climate change that you think is relevant?

Appendix C: Auxiliary materials with emotional vocabulary

Wheel of emotions (Plutchik, 2001)

List of Emotions (David, 2016)

Angry	Sad	Anxious	Hurt	Embarrassed	Happy
Grumpy	Disappointed	Afraid	Jealous	Isolated	Thankful
Frustrated	Mournful	Stressed	Betrayed	Self-conscious	Trusting
Annoyed	Regretful	Vulnerable	Isolated	Lonely	Comfortable
Defensive	Depressed	Confused	Shocked	Inferior	Content
Spiteful	Paralyzed	Bewildered	Deprived	Guilty	Excited
Impatient	Pessimistic	Skeptical	Victimized	Ashamed	Relaxed
Disgusted	Tearful	Worried	Aggrieved	Repugnant	Relieved
Offended	Dismayed	Cautious	Tormented	Pathetic	Elated
Irritated	Disillusioned	Nervous	Abandoned	Confused	Confident