University of Sheffield

'*The planet is a gift but we're the burden*': an IPA study exploring how young people engaged in climate action are experiencing climate change

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Abstract

In recent years, attention has been drawn to the psychological implications of climate change (Clayton, 2020). Importantly, climate change will disproportionally impact CYP (Sanson & Burke, 2019; Thiery et al., 2021), yet their voices have, until recently, largely been neglected. CYP's views have been expressed predominantly through protest and large-scale structured surveys which have indicated that a significant proportion of CYP are concerned about the impacts of climate change on the world and their futures (e.g., Atherton, 2020; Children's Commissioner, 2021; Friends of the Earth, 2020). Whilst some research has attempted to capture children's views more holistically (e.g., Karsgaard & Davidson, 2021; Orlowski, 2020; Strife, 2012), qualitative research from the perspective of CYP remains sparse. The BPS DECP discussion paper highlighted the relevance of climate change within the EP profession and considered the role EPs have in seeking and representing CYP's views on the topic (O'Hare, 2022a). Adopting a phenomenological positioning and using IPA as a research method, I aimed to understand how in a Western context CYP engaged in climate change action are experiencing climate change and what EPs can learn from these insights. Participants were selected purposively, and three young people aged 13 to 16 years took part. Visual methods were incorporated to support elicit verbal data through individual semi-structured interviews. Seven group experiential themes were identified:

- A sense of preciousness and being in awe of Earth – 'It's a sign of how beautiful our world is'
- A sense of loss and grief – 'We're destroying what we're living on'
- A sense of guilt, betrayal and remorse – 'The planet is a gift but we're the burden'
- A sense of standing on the precipice: fear and insecurity of 'what will become of our futures'
- A flicker of hope, a sense of possibility that 'fate is in our hands'
- A sense of threat: climate change taps into other forms of destruction
- A sense of the other as an adversary – 'They should be doing a lot more'.

Implications for educational psychology are discussed.

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Acronyms

APA	American Psychological Association
BBC	British Broadcasting Corporation
BPS	British Psychological Society
CYP	Children and Young People
DECP	Division of Educational and Child Psychology
DfE	Department for Education
EP	Educational Psychologist
EPS	Educational Psychology Service
GETs	Group Experiential Themes
IPA	Interpretative phenomenological analysis
IPCC	Intergovernmental Panel on Climate Change
LA	Local Authority
PETs	Personal Experiential Themes
PTMF	Power Threat Meaning Framework
SENCo	Special Educational Needs Co-ordinator
TA	Thematic analysis
TEP	Trainee Educational Psychologist
UK	United Kingdom
UN	United Nations
UNCRC	United Nations Convention on Rights of a Child
UNICEF	United Nations International Children’s Emergency Fund
US	United States of America
YP	Young People

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Chapter 1: Critical Literature Review

1.1 Introduction

This chapter begins by conceptualising 'climate change' before exploring the significance of climate change and where I position myself concerning this research. I then explore research considering psychological implications and emotional responses to climate change. I subsequently discuss children and young people (CYP) and climate change and how this relates to educational psychology. Finally, I outline the rationale for this research and state the research aims and questions.

1.2 Operationalising Climate Change

The term 'climate change' originated in the 1970s (Broecker, 1975) and gained traction after the establishment of the Intergovernmental Panel on Climate Change (IPCC) in the 1980s, subsequently becoming widely used within mainstream discourse (Sekar, 2024).

'Climate change' can be conceptualised in different ways, with some not explicitly referring to climate change as a result of human action; for instance, the IPCC defines climate change as changes in the climate for an extended period, due to either natural *or* human-induced processes (IPCC, 2012). However, in this research, climate change within the last century is operationalised as "a theory or construct based on two premises: firstly, there are long-term changes in temperature and weather patterns and, secondly, while there may be some natural shifts in these patterns, these changes are primarily a result of human activity" (Dennan, 2023, p.4). This reflects the UN definition, "Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases" (UN, n.d). Furthermore, an IPCC assessment reported with "95 per cent certainty that human activity is the dominant cause of observed warming since the mid-20th century" (IPCC, 2013, p.v). Therefore, the above conceptualisation was chosen because I felt it important to reflect the human influences on climate change within the last century, which is well-recognised within the science community (IPCC, 2014; IPCC, 2023; Lynas, Houlton & Perry, 2021).

The term ‘climate crisis’ has also become mainstream in recent years, which is argued to highlight a sense of urgency (Sekhar, 2024). Whilst I occasionally use this term, within this research, I largely use the term ‘climate change’ to mirror that used in the literature.

1.3 Climate Change as a Global Threat

Whilst there is a large amount of research exploring the threat of climate change, unfortunately, within the scope of this literature review it is not possible to go into further detail about a range of debates and issues around this.

Climate change is arguably the largest threat of the century (Costello et al., 2009; Mann, 2009), with then-UN Secretary-General Ban Ki-moon calling it “the defining challenge of our age” (The Guardian, 2007, para.2). This is supported by a recent IPCC report stating climate change is “a threat to human wellbeing and planetary health” (IPCC, 2023, p.24). Despite these warnings, there is concern the public is grossly underestimating the graveness of the climate crisis, given the severity “is difficult to grasp for even well-informed experts” (Bradshaw et al., 2021, p.1).

Concerningly, the rate of climate change has already exceeded many predictions, with average global surface temperatures increasing by 1.1°C above those from 1850 to 1900 between the years 2011 and 2020, and the highest surface sea temperatures in more than 12000 years (Bova et al., 2021; IPCC, 2023). The accelerating changes to Earth and its atmosphere have been far-reaching, including extreme weather and climate events which have adversely affected individuals, families, communities, and the environment (IPCC, 2023).

1.4 Political Context

Here, I acknowledge the political context within which this research is situated, however, there is not scope enough to explore this in-depth.

Given the established anthropogenic nature of climate change and the way climate policy shapes the trajectory of global carbon emissions, politics and climate change are inextricably interlinked (Haibach & Schneider, 2013; Moore et al., 2022). Perhaps unsurprisingly then, views on climate change appear related to political divisions, with individuals supporting left-

wing political parties seemingly more inclined to see climate change as a global threat (Poushter, Fagan & Gubbala, 2022).

Traditionally right-wing political parties support capitalist ideology, which is similarly connected to climate change. This is because, arguably, capitalism is a system which, in pursuit of economic gains, requires increasing levels of production, expansion and consumption, exploiting natural resources and the environment in the process (Baer, 2012). Global capitalism has arguably led to increased economic inequalities between and within countries, giving rise to social injustice and inequity, as environmental issues intersect with politics and economics (Baer, 2012). This is most evident in the gap between industrialised and developing countries and between the global north and south (Haibach & Schneider, 2013). For instance, carbon emissions in countries classified as 'high-income' surpass 'low', 'middle' and 'high-to-middle' income countries combined (Baer, 2012). This means communities least responsible for climate change are disproportionately affected, and least equipped to manage its impacts (IPCC, 2023).

1.5 Position Statement

I hold a deep interest in the natural world and how we can preserve and protect the planet. I have grappled with difficult and occasionally conflicting feelings concerning the planet and climate change. I marvel in awe at the beauty of nature and recognise that spending time in nature is a tonic for my well-being. I also experience profound concern about the impact humans have on the planet and the uncertainty of the future. I feel frustrated by the lack of governmental action to mitigate the impacts of climate change and, when considering the interconnected nature of climate change, capitalism and politics, am curious about the motives of the politically powerful (i.e., whether they may be driven by a desire to maintain their power and privilege). Despite taking steps to reduce my impact, I am aware my actions contribute to the current crisis, through which I experience a sense of inner tumult and guilt. This is exacerbated by my understanding that climate change will impact others significantly more than myself; as a middle-class individual in the United Kingdom (UK), I am aware I am likely to be less impacted by direct impacts of climate change.

Despite this interest, when I started the doctoral training, perhaps naively, I had not considered it relevant to educational psychology. However, on an Educational Psychology Service (EPS) placement, I noticed emerging reports of CYP experiencing anxiety associated with climate change. This surprised me and made me wonder what it must be

like for children growing up with the climate crisis at a tipping point. I was struck by the intensity of the feelings reported, the way children were positioned (i.e., that being concerned is an unusual or atypical response) and my lack of understanding about how best to support such CYP. This led to an initial personal interest becoming a burgeoning professional pursuit.

Whilst I have tried to maintain a stance of curiosity throughout my research, I acknowledge my personal feelings towards climate change and perception of climate change as political will impact my interpretation of prior research and shape my interpretations of participants' experiences.

1.6 Psychological Implications of Climate Change

The attention paid towards climate change and health has grown in popular culture and research; since 2007 there has been a 78% increase in global newspaper coverage and scientific papers on the topic have tripled (Watts et al., 2018). However, whilst implications of climate change on physical health have been well documented over the past couple of decades, only in recent years has attention been drawn to psychological implications (Clayton, 2020).

Despite only a recent uptake in interest, an increasing body of research suggests links between climate change and mental health (Clayton, 2020). Psychological bodies including the British Psychological Society (BPS) and American Psychological Association (APA) have publicly recognised the impact of climate change on mental health and well-being (Clayton et al., 2017; Clayton, Manning & Hodge, 2014; O'Hare, 2022a; O'Hare, 2022b). Moreover, 43 leaders of psychological associations signed a 2019 resolution recognising the adverse effects climate change-related events can have on mental health and agreeing to collaborate and advocate to raise awareness and mitigate the effects (American Psychological Association, 2019).

Dooley et al. (2021) proposed different pathways to which climate change can impact mental health. People can experience the effects of climate change in a variety of ways, some being acute, including extreme weather events (e.g., floods, wildfires, landslides), whilst others occur on a more gradual basis (e.g., increasing temperatures, rising sea levels) (Lawrance et al., 2021). Some effects occur more indirectly, such as observing landscape changes or learning about climate change within the education system or through the media (Lawrance

et al., 2021). Consequently, Dooley et al. (2021) suggest climate change can impact mental health directly (from experiencing an extreme weather event) and indirectly (through awareness of the climate crisis). Within the scope of this thesis, it has not been possible to explore the psychological implications of the direct impacts of climate change in depth, however, I have summarised this research in Appendix 1. Whilst I now discuss the indirect impacts of climate change, it is important to note this is best characterised on a continuum rather than binary categories, as there is no clear cut-off point between direct and indirect effects (Dooley et al., 2021).

1.6.1 Indirect Impacts of Climate Change

Whilst research suggests the amount of exposure to climate change-related events is associated with poorer mental health outcomes, there appear to be psychological implications even for those not directly affected (Lawrence et al., 2021; Léger-Goodes et al., 2022). These can be referred to as 'indirect' impacts of climate change and suggest people can be distressed simply through awareness of climate change (Léger-Goodes et al., 2022). There is currently less research and understanding of how people experience the indirect effects of climate change (Léger-Goodes et al., 2022; Ramadan et al., 2023).

Given one could interpret the indirect effects of climate change in various ways due to the impacts of climate change being best represented on a spectrum (Dooley et al., 2021), in this research 'indirect' refers to learning about impacts of climate change through media, at school or from others (e.g., parents/caregivers, peers etc). The emotional response to indirect impacts of climate change bears important significance for our current context because, whilst UK residents face some direct effects of climate change (e.g., flooding, rising temperatures), the country's infrastructure, geography, and resources mean we are less exposed to direct impacts; therefore, UK residents predominantly experience climate change indirectly (Sanson et al., 2019). The emotional response to the indirect effects of climate change is also important for the range of people impacted; with modern-day communications, most people hear about climate change in the media and, therefore, almost anyone can be affected, regardless of location (Clayton, 2020).

1.6.2 Emotional Responses to Climate Change

A range of emotional responses including sadness, fear, guilt, anger, despair and

helplessness are related to the emotional toll of climate change on our well-being (Maran & Begotti, 2021; Pihkala, 2020). Several novel terms have been introduced in recent years to describe emotional impacts of climate change, including the psychological phenomena 'eco-anxiety', 'solastalgia' and 'climate-grief' (Albrecht, 2012; Clayton et al., 2017; Cunsulo & Ellis, 2019).

'Eco-anxiety', also known as 'ecological anxiety' or 'climate anxiety'

In recent years, such terms have received growing attention, particularly in the media. Climate activist Greta Thunberg has spoken out about her experiences of climate anxiety (Thunberg et al., 2020) and it was referred to as the 'biggest pop-culture trend' of 2019 (McGinn, 2019). Whilst this demonstrates the prevalence of the term within popular discourse, positioning climate anxiety as a 'trend' arguably undermines the severity of the climate crisis. The term eco-anxiety was first linked to Albrecht (2012), who defined it as "the generalised sense that the ecological foundations of existence are in the process of collapse" (p.249). A subsequent well-recognised definition given by the APA refers to eco-anxiety as "a chronic fear of environmental doom" (Clayton et al., 2017, p. 68).

Individuals' experiences of eco-anxiety vary greatly; while some experience mild distress, others experience serious depressive and anxious symptoms affecting daily functioning (Burke, Sanson & Van Hoorn, 2018; Léger-Goodes et al., 2022; Ratinen & Uusiautti, 2020). Some individuals feel empowered to take action, whereas others experience debilitation and paralysis when faced with the gravity of the situation (Wolf & Moser, 2011; Pihkala, 2020).

Attempts to gain clarity over the conceptualisation of eco-anxiety and to subsequently measure it have led to the development of anxiety scales in the clinical field (Clayton & Karazia, 2020; Hogg et al., 2021; Stewart, 2021). Clayton and Karaszia's (2020) scale measures eco-anxiety according to cognitive-emotional impairment (e.g., thoughts and feelings towards climate change, including crying and difficulties concentrating) and functional impairment (e.g., impact on relationships with others). Alternately, Hogg et al.'s (2021) scale contains four dimensions of eco-anxiety which include: affective symptoms, rumination, behavioural symptoms, and anxiety about one's impact on the planet. While the first three dimensions overlap with Clayton and Karazia's (2020) scale, the latter offers a unique element. Hickman (2020) adopts a more qualitative approach to conceptualise eco-anxiety as 'mild' (temporary feelings of upset), 'medium' (feeling upset more often), 'significant' (daily distress, increasing in frequency and intensity) and 'severe' (severe cognitive changes including intrusive thoughts, difficulties sleeping and inability to enjoy aspects of life) based on case studies from psychotherapy. Hickman (2020) asserts this

framework is not rigid, but a way to support individuals to make sense of their experiences. Whilst some individuals may find it helpful to conceptualise and measure their experience of eco-anxiety to enable them to have access to support, the use of scales arguably pathologises responses to climate change and shifts attention towards individual mental health, when societal response is required (Clayton, 2020).

Hickman (2020) argues that whilst the term climate anxiety may help to understand, validate and support individuals experiencing difficult feelings, it should not be used to label emotional responses as disordered. The importance of avoiding pathologising emotional responses to climate change has been echoed by many researchers (Lawton, 2019; Sanson & Bellemo, 2021; Sanson & Dubicka, 2022). Looking inward at emotional responses to climate change, rather than outwards (i.e., to political systems and structural inequality) arguably reinforces within-person discourses and therefore may be counterproductive to social change (Cohen, 2017; Eccleston, 2004). This is a crucial limitation of such research, including my own, which shifts the focus inwards (i.e., to introspection).

Climate anxiety could instead be reframed as a moral emotion; a rational, natural, and healthy response to an existential, climate crisis (Clayton, 2020; Hickman, 2020; Pihkala, 2020). Through this lens, people's distress can be understood with respect to their relationships and connectedness to other people, animals, and the planet. As Hickman (2020) eloquently puts it, difficult feelings towards climate change are "a sign that hearts are still beating with the planet" (p.419). The term 'eco-anxiety' consequently does not capture the full picture and instead could be constructed as 'eco-empathy', 'eco-caring' or 'eco-compassion' (Hickman, 2020). Reframing eco-anxiety as eco-empathy shifts the focus away from viewing climate anxiety as an individual concern towards it being a collective, global concern for which a societal response is required (Clayton, 2020).

'Eco-grief' also known as 'ecological grief' or 'climate grief'

The phenomenon termed 'ecological grief' represents an emotional response to climate-related loss and can be conceptualised as "the grief felt in relation to experienced *or* anticipated ecological losses, including the loss of species, ecosystems and meaningful landscapes due to acute or chronic environmental change" (Cunsulo & Ellis, 2019, p. 275). This term seems particularly pertinent when considering the psychological implications of indirect experiences of climate change, due to its emphasis on anticipated losses of landscapes, ways of life, ecosystems, and species (Comtesse et al., 2021).

'Solastalgia'

‘Solastalgia’, derived from the terms ‘solace’ and ‘nostalgia’, is a psychological phenomenon referring to distress experienced because of the loss of personally significant places (Clayton et al., 2017). This occurs when individuals experience a sense of loss of relationship to a place because of environmental change (Albrecht et al., 2007; Clayton et al., 2017). This term is therefore perhaps most applicable to those who experience gradual impacts of climate change (e.g., by witnessing changes to landscapes over time).

1.7 CYP and Climate Change

Climate change concern is reported to be growing (Friends of the Earth, 2020; Ipsos, 2021) and there appears to be a generational divide, with younger generations most concerned about the impact of climate change on psychological well-being. In a large-scale poll, 67% of 18-to-23-year-olds and 63% of 24-to-39-year-olds reported being concerned about how climate change may affect their mental health, in comparison to 42% of 56-to-74-year-olds and 58% of 40–to-55-year-olds (APA, 2020).

While research has tended to focus on the impacts of climate change on physical health rather than mental health and well-being, the psychological impact of climate change on CYP is an increasing area of interest in research and popular discourse. The impact of climate change on CYP’s well-being is of particular significance, given climate change has a disproportional impact on CYP (McGushin et al., 2022). Despite the climate crisis being created by previous generations, it is today’s CYP that will suffer its consequences the most (Sanson & Burke, 2019). Research estimates children born in 2020 will experience more than three times as many climate disasters, highlighting what has been termed ‘intergenerational inequalities’ (Thiery et al., 2021). Facing an uncertain future, the younger generations arguably have an imposed psychological burden (Sanson & Bellemo, 2021). Further, CYP may be particularly at risk of having their mental health affected by the impacts of climate change as their brains are still developing, so they are particularly vulnerable to the effects of prolonged stress which may alter brain structures and increase sensitivity in the brain’s stress response (Wu, Snell & Samji, 2020).

1.7.1 Voices of CYP

Article 12 of the Convention for the Rights of a Child (UNCRC) states children have the right to be involved in decisions affecting them, express their views, and be listened to and taken

seriously (United Nations, 1989). Given the climate crisis will affect younger generations the most, it is more imperative than ever that adults listen to CYP. Despite this, only in recent years have CYP seemingly had a voice in the matter, having to go to extraordinary lengths to be heard (Sanson et al., 2019). Greta Thunberg, then aged 15, inspired a global movement after going on school strike for climate action in August 2018. This galvanised others, leading to more than 1.4 million CYP participating in school strikes worldwide (Carrington, 2019).

Despite the voice of the child being enshrined in legislation, many adults, particularly those in positions of power, have criticised and dismissed the efforts of CYP attempting to have their voices heard concerning the climate crisis. For example, in 2019 the then-UK Prime Minister Theresa May criticised students for striking (Watts, 2019). This seems in contradiction with Article 15 of the UNCRC (United Nations, 1989) which states children have the right to freedom of association, including the right to partake in peaceful protest. Becoming a figurehead for the movement, Thunberg became a particular target, repeatedly being berated in the media; for instance, then-United States (US) President, Donald Trump tweeted, “So ridiculous. Greta must work on her Anger Management problem, then go to a good old-fashioned movie with a friend! Chill Greta, Chill” (Trump, 2019).

However, it is not only right-wing politicians who responded in this manner. There have similarly been opinion pieces suggesting children cannot have opinions on climate change as they do not understand it (Sugar, 2020), or that children cannot be taken seriously (Swaim, 2019). These narratives seem to position CYP as immature, naïve, intellectually inferior and their views less important. In a discourse analysis of newspaper narratives around responses to the climate crisis, Benoit, Thomas and Martin (2022) argue children are portrayed as juvenile, moulded and owned by adults. They claim this is a defensive stance, to protect adults’ sense of self in the face of existential concerns and overwhelming ecological guilt and blame. Thus, instead of celebrating CYPs’ agency, many adults react defensively; unable to tolerate the mirror being held up to them, they perhaps employ coping mechanisms to alleviate difficult feelings (Hickman, 2020).

1.7.2 CYP Not Feeling Heard

The lengths CYP have had to go to have a voice on climate change and the subsequent backlash appear to have further alienated them. Chiw and Ling (2019) surveyed 74 Australian CYP aged between 7 and 24; while 90% considered climate change an important

concern, 70% felt concerned others do not take their opinions on the matter seriously. However, it is worth noting this was an undergraduate research project and, therefore, has not undergone rigorous peer-review.

There have been similar findings specific to the UK context; in a BBC Newsround survey, 59% of CYP surveyed felt their voices on climate change were not being heard and 41% felt they did not trust adults to address the issues caused by climate change (Atherton, 2020). In a more recent larger-scale survey of over 10,000 young people (YP) aged 16-25 years across 10 countries, 65% of respondents agreed that governments are failing YP worldwide (Hickman et al., 2021). Interestingly, the concern YP reported was associated with their attitudes towards the government's response to climate change; those who felt the response had been inadequate tended to experience greater distress. A strength of this study was that participants were not informed of the research topic before beginning the questionnaire, meaning it was more likely to represent a range of YP's views, rather than solely those with a specific interest in climate change. However, as participants were aged 16-25, a significant proportion of respondents were adults, thus their experiences may not be representative of younger children. A further limitation of these surveys is they were online and so required internet access, possibly restricting the sample diversity (Atherton, 2020; Chiw & Ling, 2019; Hickman et al., 2021).

To fulfil Article 12 of the UNCRC (United Nations, 1989), adults are required to listen to children's views on climate change and take them seriously. Political structures and processes are typically centred around adults' needs and tend to be less responsive to needs of CYP, marginalising them (Harris, Wyn & Younes, 2010). Some CYP feel they are not being listened to and are fighting to be heard (Léger-Goodes et al., 2023; Rushton et al., 2023). The perceived lack of sufficient action coupled with feeling dismissed, patronised and pathologized seems to have led some YP to feel betrayed by the adult world, perceiving the continued assault on Earth to be a personal attack on them and their futures (Hickman, 2020). Furthermore, criticism for speaking out about their fears has meant some YP have been silenced, not feeling safe to speak honestly (Hickman, 2020). This suggests for CYP to feel safe enough to engage in candid discussions about climate change, adults need to create a safe, trusting space where children's emotions are validated, and they feel heard.

In summary, a proportion of CYP feel their opinions do not matter and their voices are not listened to or acted upon, and this seems to be contributing to feelings of distress towards climate change (Atherton, 2020; Chiw & Ling, 2019; Hickman et al., 2021).

1.7.3 Quantitative and Mixed Methods Research

As well as through protest, CYP have expressed their views via other means, predominantly through surveys and questionnaires (e.g., Children's Commissioner, 2021; Hickman et al., 2021, United Nations Children's Fund UK, 2013).

The Global Context

Whilst there is significant variation in reports of climate change concern across studies and countries, in research carried out within the last decade over 50% of respondents tend to report feeling concerned about climate change.

In a survey of 549 Finnish ninth-grade students, 55% agreed with the statements 'the threat should be taken more seriously' and 'I am worried about its consequences' and 68% felt that 'it is a phenomenon that is harmful to humans and nature' (Hermans & Korhonen, 2017). That said, these percentages included those who only *partially* agreed, which may arguably overstate the concern CYP are experiencing. Nevertheless, Harker-Schuch et al. (2020) surveyed 453 12-to-13-year-olds in Austria and Australia; on average 88.5% of respondents agreed climate change *is* something to worry about and little difference was found across countries (84.6% for CYP in Austria and 89.1% in Australia). However, this sample may have been biased as more participants were recruited from school classes in which the teachers were interested in the research. In contrast to the above studies, Lawson et al. (2019) surveyed 182 11-to-14-year-olds in North Carolina who were relatively unconcerned on average about climate change. However, there was significant variation between participants (a standard deviation of 3.352), meaning responses were widely spread.

In a large-scale survey across 11 countries, 12,627 11-to-16-year-olds were asked about their feelings about climate change and 74% reported being either 'very' or 'quite' worried about global warming (Boyes et al., 2014). Responses between countries varied, with those from countries disproportionately affected by climate change reporting greater levels of concern (e.g., 91% of young people from Brunei and 89% from India expressed concern in comparison to 53% in the US and 50% in the UK) (Boyes et al., 2014). A strength of this research was that the questionnaire was translated into different languages which may have increased the diversity of the sample, however, the sample was opportunistic, limiting its representativeness.

In another more recent large-scale study, Hickman et al. (2021) surveyed 10,000 YP aged

16-25 across 10 countries to understand their thoughts and feelings towards climate change. This included respondents from countries experiencing less direct effects of climate change (e.g., the UK) and countries frequently experiencing extensive direct impacts of climate change (e.g., the Philippines). Supporting Boyes et al.'s (2014) findings, YP in countries more directly impacted expressed greater concern. Despite these differences, an overwhelming amount of YP across all countries reported feeling worried about climate change, with 84% of those surveyed reporting being at least moderately worried and 59% very or extremely worried. Approximately 75% of respondents reported feeling concerned about the future, over 50% felt they would not have equal access to the opportunities their parents enjoyed and 39% reported feeling hesitant to have children. Concerningly, over 45% of the YP surveyed reported their feelings about climate change impact their functioning and everyday life. However, notably, the response options were limited (i.e., 'yes', 'no' or 'prefer not to say') which does not allow for more nuanced responses and may present perspectives as more polarised.

Whilst the research tends to focus on challenging emotional responses, Ratinen and Uusiautti (2020) surveyed 950 Finnish students and found their hopefulness towards climate change related to their sense of self-empowerment. Further, students' feelings of hope towards climate change appeared built on constructive-based hope (i.e., the belief climate change will be addressed by proactive engagement through action) rather than denial-based hope (i.e., feeling hopeful for the future through minimising the threat of climate change) (Ratinen & Uusiautti, 2020). However, this was a convenience sample, with participants recruited from city locations, thus the sample may be biased and not geographically or demographically representative.

Whilst I have attempted to engage with literature from other nations, it is important to acknowledge that the vast amount of published literature in the English language within this topic is from Westernised, industrialised nations (e.g., Finland, Austria, Australia, USA) and therefore is not representative of all CYP's experiences. This is particularly important given that climate change does not impact all CYP equally with some CYP experiencing climate change more directly and extremely than others dependent upon the country's geography as well as their infrastructure and resources.

The UK Context

Despite being less directly impacted by climate change, a significant proportion of UK-based CYP report climate-related concerns. In a UNICEF UK poll (2013), 74% of the 11-to-16-year-

olds surveyed expressed concerns about how the world will be impacted by climate change and 64% were worried about its effects on developing countries. However, this survey did not provide information about recruitment methods, nor how many CYP were surveyed; arguably, the lack of transparency impacts its trustworthiness and credibility.

More recently, over 2000 CYP aged 8-16 undertook a BBC Newsround survey about feelings towards climate change and only 3% of respondents said the environment was unimportant to them (Atherton, 2020). A substantial proportion of those surveyed reported they were worried about the planet (73%) and about climate change's impact on their lives (58%). A smaller, but significant proportion of the CYP reported having bad dreams about climate change (19%) and 17% said their concerns affect their eating and sleeping. A crucial limitation of this survey, as with several of the other surveys discussed (e.g., Children's Commissioner, 2021; Chiw & Ling, 2019; UNICEF, 2013), is that it was not published in a journal article, thus not subject to rigorous peer review.

In the largest survey of its kind, over 500,000 children in England aged 4-17 responded to The Big Ask, an online survey asking children to share views on their lives (Children's Commissioner, 2021). When asked what worried them most about the future, the environment was the second most common response (over 39% of 9-to-17-year-olds), suggesting this is a priority for CYP. Children spoke about wanting to care for the world and a vision of a greener future. One 12-year-old said, "If we don't fix climate change, we won't have a future," (Children's Commissioner, 2021, p. 9). Akin to the global picture, concern about climate change also appears to be increasing in the UK; a poll reported 70% of YP (aged 18-24) are *more worried* than a year prior (Friends of the Earth, 2020).

Finnegan (2023) explored the future outlooks of 512 16-to-18-year-old secondary school students. The students had mixed emotions towards the future; for instance, on average a negative scenario about the future was rated as more likely to happen than a positive scenario, yet when asked to describe their feelings about the future in three words, 'hopeful' was the most frequent response (30%), followed by 'scared' (15%), 'excited' (14%), 'worried' (13%) and 'uncertain' (12%). However, this was completed during the COVID-19 pandemic which may have impacted students' outlooks.

Overall, the survey findings indicate a proportion of CYP are becoming increasingly concerned about climate change (Friends of the Earth, 2020). Although concern seems greater in countries more directly affected, CYP from countries which largely experience the effects of climate change indirectly still report feeling a significant amount of concern

(Atherton, 2020; Boyes et al, 2014; Children's Commissioner, 2021; Hickman et al., 2021; UNICEF UK, 2013).

While the surveys indicate the general nature of CYP's thoughts and feelings about climate change and suggest a significant proportion of CYP are concerned, they have some important limitations. Firstly, in some surveys, the samples are not representative of the general population, because those surveyed were likely to have particular interest in the environment, meaning the number of CYP expressing concern may be overinflated (e.g., Ojala, 2012b, UNICEF UK, 2013). Additionally, the surveys tend to have rigid structures and have been produced by adults, which means that CYP's responses are framed through adults' perspectives (e.g., Atherton, 2020). Further, many questions within the surveys were closed, meaning CYP had little opportunity to expand upon their thoughts, feelings, and ideas. As a result, they do not necessarily fully capture the complexity or nuances in CYP's feelings towards climate change or how these feelings impact their sense of self and their futures (Sanson et al., 2019).

1.7.4 Qualitative research

Whilst a growing body of quantitative research indicates widespread concern around climate change in younger populations, there is currently less qualitative research exploring perspectives of CYP. However, particularly in recent years, several qualitative studies capture a richer picture of CYP's perspectives on climate change. Challenging emotions are a common theme, with CYP expressing a range of complex emotions, including feelings of anxiety, anger, frustration, grief, sorrow, hopelessness, despair, urgency and guilt (e.g., Arnot et al., 2024; Diffey et al., 2022; Hickman, 2020; Karsgaard & Davidson, 2021; Léger-Goodes et al., 2023; Payton, 2023; Rushton et al., 2023; Thompson et al., 2022). Drawing on clinical case studies to explore CYP's eco-anxiety, Hickman (2020) elegantly described CYP as 'embodying' the distress of the planet and reported that some YP experience a sense of despair, *"I don't want to die, but I don't want to live in a world that doesn't care about children and animals"* (p. 420). However, it seems likely these CYP were significantly concerned about climate change, given these were clinical case studies from psychotherapy and, therefore, such views are not representative of all CYP. Further, as these are reflections on clinical case studies rather than a study it is difficult to separate the CYP's experiences from the author's reflections.

Strife (2012) conducted 50 semi-structured interviews with children aged 10-12 in the US to

explore their feelings towards environmental issues. Using content analysis, feelings were categorised into themes of sadness, fear, and anger. Feelings of sadness and fear tended to relate to concern towards the future; children expressed pessimistic outlooks and shared apocalyptic predictions. A limitation of Strife's (2012) research, however, was that analysis involved systematic counting to quantify the types of emotions expressed; basing decisions on word count is arguably reductionist, as it does not consider underlying meanings behind the words. A further limitation is the reliance on participants' emotional vocabulary and ability to identify and articulate their feelings, which, particularly given the participants' young ages, could be constraining.

Despite these limitations, a sense of uncertainty or feelings of fear towards the future has similarly been found in other research (Arnot et al., 2024; Diffey et al., 2022; Léger-Goodes et al., 2023; Orlowski, 2020; Rushton et al., 2023; Thompson et al., 2022). For instance, when McDonald-Harker, Bassi and Haney (2022) interviewed 83 CYP aged 5-17 in Canada, they expressed not only concern for their futures, but for future generations and the world they will inherit. However, the CYP in this study had directly experienced the impacts of climate change (i.e., a flood disaster), therefore the emotional responses may differ to those who experience climate change more indirectly. Nevertheless, fear of the future was similarly a core theme in Rushton et al.'s (2023) research in England, with CYP regarding climate change as the biggest problem affecting their futures and fearful it is 'getting to the point of no return'. This study included 85 CYP aged 11-18 and content analysis was used to analyse written responses to the question 'What comes to mind when you hear the words climate change?'. A crucial limitation of this methodology, however, is that richness of the data was dependent upon CYP's abilities to articulate themselves in written form.

Thompson et al. (2022) interviewed 15 CYP aged 14-18 in the UK, and they also expressed negative feelings towards the future, conveying a feeling that time is running out. However, it is worth noting this research was during the COVID-19 pandemic which may have impacted upon participant's feelings towards the future. Whilst feelings of fear seemed consistent across studies, from a psychodynamic perspective, rather than these feelings being unique to the climate crisis, it could be argued we are tapping into childhood anxiety, which is always displaced towards something.

Many of the CYP in Thompson et al.'s (2022) study appeared to experience feelings of anger and frustration, often directed towards those they saw as having the power to affect change and those they held responsible for the current situation (e.g., governments, large companies, and older generations). Other research has similarly found much of the anger

and frustration expressed by CYP is directed towards adults for failing to act (Arnot et al., 2024; Karsgaard & Davidson, 2021; Léger-Goodes et al., 2023; Rushton et al., 2023; Strife, 2012) with CYP's feelings towards climate change appearing to be framed by the inaction of older generations (Hickman, 2020). CYP in Arnot et al.'s (2024) study seemed to experience a sense of injustice, discussing inheriting the crisis from older generations who have had the luxury of living on a healthy planet. Interestingly, Diffey et al. (2022) suggested YP's emotional responses to climate change are connected to others' responses; for instance, when perceiving inaction, YP described challenging feelings increasing and, in turn, when they felt that their concerns about climate change were taken seriously, they experienced a sense of comfort, connection and relief. This article was written by 23 YP from 15 countries, which meant voices of CYP were at the forefront. However, it is important to recognise they represent a biased sample as they identified as climate concerned.

Feelings of powerlessness and helplessness also appear to be a common theme in qualitative research (Arnot et al., 2024; Connell et al., 1999; Karsgaard & Davidson, 2021; Payton, 2023; Strife, 2012; Thompson et al., 2022). CYP feel climate change is out of control (Thompson et al., 2022), they are too young to act (Strife, 2012) and lack the power to exert influence (Connell et al., 1999; Thompson et al., 2022). Using reflexive thematic analysis to explore views, feelings, and experiences of climate change, Payton (2023) interviewed five 16–to-17-year-olds who identified as climate-concerned. Their responses conveyed a sense of bearing the burden of climate change, whilst simultaneously feeling they lacked the power to effect change (e.g., having limited behavioural control due to not yet being an adult and being just one individual). As with my research, Payton's (2023) was completed as part of a doctoral thesis and is not published in a peer-reviewed journal article, which has implications when assuming the credibility of the research. Further, participants represent a biased sample, being selected based on having a degree of climate concern. Despite this, similar findings have been found in research with younger CYP, including 14-to-18-year-olds (Thompson et al., 2022) and 12-to-16-year-olds (Arnot et al., 2024). Experiencing a sense of pressure to act alongside powerlessness appeared related to CYP being positioned as 'agents for change' whilst simultaneously being told they are 'too young' and 'should be in school' (Arnot et al., 2024).

Feelings of hope and optimism were identified in the qualitative research to varying extents. Orlowski (2020) reported that none of the participants appeared defeated and all expressed hope humankind would withstand the climate crisis, despite challenges and suffering. However, Orlowski's (2020) approach to data analysis was not described, which has implications for the transparency and rigour of the research. Nevertheless, for the YP Payton

(2023) interviewed, their concerns about climate change similarly did not seem to dominate their thinking and they expressed optimistic outlooks (as identified within the theme 'On the other hand, positive change can happen'). Karsgaard and Davidson's (2021) participants also acknowledged the seriousness of climate change whilst maintaining a sense of hope and commitment to address it, with an acknowledgement that this can be challenging. In contrast, more positive emotional responses including hope, passion and solidarity were infrequently identified in Thompson et al.'s (2022) research. However, when asked about expectations for change there was some acknowledgement the climate crisis could be avoided, although they felt the situation would deteriorate before it improves.

Research suggests CYP's hope appears to be connected to climate change action; for instance, CYP expressed hope that people will change (Léger-Goodes et al., 2023), that we can make a change if we try (Rushton et al., 2023) and, in Karsgaard and Davidson's (2021) study, hope seemed to be fostered by observing others making positive change.
Similarly, Strife (2012) reported children's hope for the future was dependent on whether humans act on climate change.

Research suggests CYP may be experiencing a sense of grief concerning climate change (Diffey et al., 2022; Léger-Goodes et al., 2023; Rushton et al., 2023). CYP discussed the loss of plants, animals and nature and expressed grief concerning the world dying and the suffering of countries, animals and people, particularly those in communities vulnerable to the impacts of climate change (Diffey et al., 2022; Léger-Goodes et al., 2023; Rushton et al., 2023). In Karsgaard and Davidson's (2021) research, the grief expressed related to both current and anticipated losses, with a particular focus on animals and people considered vulnerable (i.e., those socially and economically oppressed). Interestingly, rather than disengagement, grief seemed to prompt a sense of urgency to make changes (Karsgaard & Davidson, 2021). However, in Hickman's (2020) clinical case studies exploring CYP's eco-anxiety, she noted that for some CYP the feelings of grief were so intense they no longer felt comfortable spending time in nature, as it triggered intense feelings of grief and anger; "*If people stupidly tell me that time in nature is healing all I can say to them is that all I see is dying animals and plants"* (Hickman, 2020, p 420).

Another common theme arising in qualitative research relates to feelings of guilt and shame. In Thompson et al.'s (2022) research, guilt related to participants feeling they were not doing enough to prevent climate change and their privilege of living in an area not as directly impacted by climate change. Hickman (2020) similarly described how CYP experiencing climate change indirectly felt guilty they still had enjoyment in their life and displayed an

awareness of and empathy towards others more directly impacted. Another study found CYP's feelings of guilt and shame related to how their actions impacted negatively on the planet (i.e., their culpability due to consumerism, wealth and privilege) (Karsgaard & Davidson, 2021).

As with my research, a crucial limitation of much of the qualitative research is that it does not represent a range of CYP's perspectives. The research predominantly occurs within industrialised, higher-income countries arguably less impacted by direct effects of climate change or better equipped to manage the impacts, such as the UK (e.g., Payton, 2023; Rushton et al., 2023; Thompson et al., 2022), Canada (Léger-Goodes et al., 2023; McDonald-Harker, Bassi & Haney, 2022; Orlowski, 2020), US (Strife, 2012) and Australia (Arnot et al., 2024). This disparity seems unjust and evokes feelings of discomfort. Whilst some qualitative research was geographically more diverse, occurring across multiple countries, participants were often required to have a certain proficiency in the English language which may have restricted the sample's diversity (e.g., Diffey et al., 2022; Karsgaard & Davidson, 2021). The qualitative research also does not always represent the perspectives of people of colour, with samples lacking ethnic diversity and thus centring the experiences of white CYP (e.g., Léger-Goodes et al., 2023; Thompson et al., 2022). The samples have also often had unequal proportions of male and female participants (Léger-Goodes et al., 2023; Orlowski, 2020; Thompson et al., 2022), thus CYP's responses may not be representative across genders. This feels particularly apt, given females appear to be experiencing greater levels of distress associated with climate change (Stevenson, Peterson & Bondell, 2019).

Several qualitative studies relied on access to the internet; whether that be for participant recruitment (e.g., Diffey et al., 2022), to complete research-related tasks (e.g., Karsgaard & Davidson, 2021) or to conduct participant interviews (e.g., Arnot et al., 2024; Léger-Goodes et al., 2023). Whilst this can help increase the geographical diversity of samples, it may also restrict the sample, as those without internet access or less proficient in navigating online platforms would not be able to participate. A further limitation of holding interviews remotely (e.g., via telephone or online) is that it may present more of a challenge to build rapport with participants, potentially impacting the richness of the data and it is difficult to ascertain whether participants are alone or have company, potentially impacting their responses (e.g., Arnot et al., 2024; Léger-Goodes et al., 2023; Thompson et al., 2022).

A further limitation of the qualitative research, as with my study, is the likelihood the researchers hold a vested interest in climate change which may impact their interpretations

of participants' responses. Another limitation is that the nature of such research, focusing on introspection and individual's inner worlds, could be argued to inhibit social change, as we look inwards, rather than outwards to the systems that have created, maintain and perpetuate climate change (Cohen, 2017; Eccleston, 2004). We could say that we have turned the issue 'outside-in' and perhaps for social change to happen we need to turn it 'inside-out'.

In summary, climate change appears to be an important issue for a significant proportion of CYP, yet many feel dismissed by adults and that their voices are going unheard (Hickman, 2020; Léger-Goodes et al., 2023; Rushton et al., 2023). The quantitative and qualitative research suggest CYP are experiencing a variety of difficult emotions concerning climate change (e.g., Atherton, 2020; Arnot et al., 2024; Hickman et al., 2021; Léger-Goodes et al., 2023; Rushton et al., 2023). Despite being a growing area of research, qualitative research exploring how CYP are experiencing and feeling about climate change currently remains sparse.

1.8 Climate Change and Educational Psychology

Despite receiving relatively little attention from the profession, interest in climate change and its relationship to educational psychology appears to have increased in recent years (O'Hare, 2022a; O'Hare, 2022b). The BPS DECP discussion paper highlighted the relevance and importance of the climate crisis to EP practice (O'Hare, 2022a), yet there is a dearth of research within the field (Allen, 2020). EPs work with CYP, the population that will be disproportionally affected by climate change (Sanson & Burke, 2019; Thiery et al., 2021). CYP are also currently reported to be experiencing the most concern about the climate (APA, 2020), and mental health issues, such as stress and anxiety, are predicted to increase (O'Hare, 2022a). Furthermore, climate change is an issue relating to social justice as it does not impact CYP equally, with disadvantaged groups the most disproportionately affected, leading to further inequality (Islam & Winkel, 2017). This is of particular importance to EPs as the Health Care Professional Council (HCPC), the professional body which regulates psychologists, recognises that issues relating to equality need to be embedded throughout all areas of practice (HCPC, 2023). Since climate change has far-reaching effects (including direct, gradual, and indirect), it seems probable EPs are already supporting affected CYP (O'Hare, 2022a). EPs are not only uniquely positioned to provide support to CYP, but also arguably have an ethical responsibility to do so (Allen, 2020). To learn how to effectively support CYP, whether at an individual or systemic level, EPs must have a more in-depth

understanding of how CYP are experiencing the climate crisis.

1.9 Rationale

In recent years attention has been drawn to the psychological implications of climate change for those directly and indirectly affected (Clayton, 2020). Research suggests CYP are becoming increasingly concerned about the impact of climate change on the world and their futures (Atherton, 2020; Children's Commissioner, 2021; Friends of the Earth, 2020). The literature predominantly consists of large-scale surveys and questionnaires (i.e., quantitative and mixed methods methodologies) (Ojala, 2023b). These surveys tend to have rigid structures and predominantly comprise closed questions, meaning CYP's responses have been framed through adults' perspectives and the complexity of their experiences has not been fully captured.

When I embarked on this research journey there was little qualitative research in the field. However, a growing body of research attempting to capture children's views more holistically is emerging (e.g., Arnot et al, 2024; Diffey et al., 2022; Rushton et al., 2023). Despite the recent increase in qualitative research, to my knowledge, there has not yet been a focus on CYP's lived experience using Interpretative Phenomenological Analysis (IPA) (further explored within the methodology). This illustrates a gap in the literature concerning rich and textured accounts of how CYP are experiencing climate change.

Climate change has a disproportional impact on CYP, yet until recently their voices have largely been neglected (Hickman, 2020). This is particularly important to the EP profession given EPs' unique role in seeking and representing CYP's views (O'Hare, 2022a). Through this research, I hope to redistribute power differentials and platform the views of CYP. Through creating conditions for CYP to consider and share their experiences and emotions about climate change, this study endeavours to create a better understanding of possible concerns faced by CYP, whom EPs support within a Western cultural context.

1.10 Research Aims and Questions

This research aims to develop an understanding of how CYP engaged in climate change action are experiencing climate change (Dennan, 2023). CYP 'engaged in climate change

action' refers to those who are a member of a pre-existing climate action group. Within this research, a climate action group is understood as a group that assembles at least once a half-term to partake in activities which aim to mitigate or raise awareness of the effects of climate change.

It is important to acknowledge that this research focuses on the Western experience of climate change and thus is not representative of all individual's experiences. As discussed, there are various ways an individual may experience climate change (e.g., directly, gradually or indirectly). Whilst individuals may encounter some direct experiences of climate change in the UK, we predominantly encounter climate change indirectly. Some CYP experience climate change more directly and extremely than others depending on their location in the world and therefore their experiences would differ.

The primary and secondary research questions are as follows (Dennan, 2023):

1. *How are CYP engaged in climate change action experiencing climate change?*
2. *What can Educational Psychologists learn from these insights/experiences?*

The first question addresses the research gap recognised in the literature review. It is exploratory and fundamentally phenomenological, as it is interested in how individuals make sense of or come to understand an experience. The secondary question is more interpretative and centres on how CYP's experiences translate to educational psychology practice.

Chapter 2: Methodology

2.1 Overview

In this chapter I discuss the philosophical underpinnings of the research (phenomenology), the methodological approach (Interpretative Phenomenological Analysis), the method, including the sample, procedure, ethical considerations, and a description of the data analysis. I also discuss the rationale for choosing Interpretative Phenomenological Analysis (IPA), instead of alternate methodologies, and consider its limitations. Finally, I discuss quality in qualitative research and IPA specifically.

2.2 Philosophical positioning

Research is guided by the lens through which the world is viewed (Killam, 2013). Grix (2004) explains that "ontology and epistemology are to research what 'footings' are to a house: they form the foundations of the whole edifice" (p. 59). This means that methods used in research are tightly bound to the philosophical and theoretical underpinnings relating to reality and knowledge (Al-Ababneh, 2020).

Ontology is the study of existence and refers to the researcher's beliefs and assumptions about the nature of reality (Rehman & Alharthi, 2016) or, as Willig (2013) elegantly clarifies, ontology is concerned with 'What is there to know?'. Ontological positions are typically described as realist (i.e., a singular reality, free from context) or relativist (i.e., various constructed realities, inextricably tied to their context) (Killam, 2013). In all research, assumptions are made about the nature of reality, thus questions of ontology are fundamental. Epistemology on the other hand is concerned with 'How can we know?', or the nature of knowledge (Willig, 2013). The researcher's ontological beliefs inform their position of objectivity and subjectivity (i.e., whether the researcher can separate themselves from the researched) which, in turn, impacts what can be known (Killam, 2013).

Consequently, to understand my research, it was important to closely examine my beliefs about reality and knowledge concerning the research questions. When deciding which approach to take I asked myself several questions drawn from Willig (2013):

- What knowledge am I hoping to create?

I aim to create phenomenological knowledge as I am interested in how each participant subjectively experiences climate change. From their accounts, I hope to develop insight into how CYP think and feel about climate change.

- What assumptions am I making about the world/the nature of reality?

Assumptions made about the world are best positioned through the phenomenological tradition. This research assumes reality can only be understood through experience. Experience is contextualised (e.g., situated within social or political contexts) and transcends subject-object duality. As the meaning individuals make from their experiences is enmeshed within their unique context, the same conditions can be experienced in various ways.

- What is the relationship between the researcher and those researched?

Developing an understanding of how participants are experiencing climate change requires interpretation, as I cannot directly access their worldviews. To interpret their accounts, I bring my own experiences which influence the way I understand participant's experiences. Thus, I cannot entirely separate myself from the research. However, I can examine my preconceptions to explore how they may have influenced my interpretations. As a result, interpretation, intersubjectivity and reflexivity are central to the role of the researcher in my research (Willig, 2013).

2.2.1 Phenomenology

My research takes a phenomenological approach. In its simplest terms, phenomenology is concerned with lived experience. Whilst the field of phenomenology is diverse, phenomenologists generally seek to understand how humans experience being in the world (Smith et al., 2022). My research aligns with this positioning as I aim to interpret how participants are experiencing the discourses around climate change (i.e., their thoughts, feelings, and perspectives). This is evident in my primary research question: *How are CYP engaged in climate change action experiencing climate change?* A phenomenological ontology is used within my research as I strive for the truth as it appears in the lived experience of participants.

Influential phenomenologists include Husserl, Heidegger, Merleau-Ponty and Sartre. Here, I

reflect on my rationale for choosing phenomenology and explore how the thinking of phenomenological thinkers influenced my research.

As we come to know about the world through our experiences, Husserl believed that to understand and gain insight into the essence of consciousness, we must start with experience rather than the objective world. Central to Husserl's thinking was 'intentionality' or 'aboutness', referring to the interaction between consciousness and phenomena; consciousness cannot be considered in isolation because it is always about experience (Dennett & Haugeland, 1978; Willig, 2013). I have drawn on Husserl's phenomenological approach in my research, through studying individuals' subjective experiences to understand how they are experiencing climate change. In alignment with this, my methodology used in-depth interviews and open questions to elicit rich, detailed accounts, capturing the complexities, textures and nuances of their experiences in order to gain deeper insights into individual perspectives.

To identify the essential features of experience, Husserl proposed a phenomenological method called bracketing, or epochέ (Tuffour, 2017). This means that when approaching phenomena, one attempts to set aside all assumptions or preconceptions and works backwards to reduce phenomena to their rawest form. However, I disagree that a phenomenon's 'essence' can be found, as I believe experience cannot be separated from its context (Tuffour, 2017).

Heidegger rejected Husserl's process of reduction, placing greater emphasis on the intersubjective nature of human existence; experience must be interpreted in context (Horrigan-Kelly, Millar & Dowling, 2016; Smith et al., 2022). He suggests consciousness and the meaning we make from our experiences are enmeshed with our relationships, history, and culture. Consciousness cannot be objective; thus, individuals are not separable from the world they occupy (Horrigan-Kelly et al., 2016). My research philosophy is more closely aligned with Heidegger's existential phenomenology as I have given mind to the intersubjective nature of consciousness in my research. I accept that as a researcher I cannot be objective; my experiences, assumptions, and judgements will undoubtedly influence my interpretations. Therefore, I have made a concerted effort to be reflexive throughout and, in doing so, I expose and examine my preconceptions. I also draw on the contextual nature of experience and demonstrate contextual sensitivity in my research by considering influential factors such as politics and climate change as a current global threat.

Merleau-Ponty was similarly interested in understanding the nature of being-in-the-world and stressed the interpretative element of our understanding (Smith et al, 2022). Phenomenological inquiry is fundamentally interpretative because it is not possible to understand another's experience by extracting it from their mind (Smith et al., 2022), thus the role of the researcher is central to the interpretation of the participant's experiences. I draw on this within my research by reading between or beyond the lines of participant's accounts to seek a richer, deeper interpretation (Tuffour, 2017). In section 2.3 'IPA' I discuss in greater detail how I have drawn on Heidegger's work on hermeneutics in phenomenology.

Merleau-Ponty differed from other influential phenomenologists by emphasising embodiment; our relationship with the world is embodied, giving us our unique perspective (Smith et al., 2022). He asserted that consciousness, cognition, and emotional experience are all embodied which means that the body has a fundamental role in the way we engage with the world (Larkin, Eatough & Osborn, 2011; Tuffour, 2017). This seems particularly apt for this research given that prior research on the topic suggests CYP are 'embodying' the distress of the planet as their pain reflects that of a dying planet (Hickman, 2020). It was therefore important for me to pay attention to embodied language to deepen my understanding of the participant's perspectives (Smith et al., 2022). Further, the way we understand and interpret others' experiences develops from our own embodied perspective, meaning we cannot experience something in the same way as another (Smith et al., 2022). This means that my understanding of the participants' experiences developed from my own unique, embodied perspective which has implications for my research relating to the interpretative nature of data analysis.

Akin to Heidegger, Sartre's phenomenology centres on existentialism. However, instead of focusing on understanding the world, Sartre focuses on understanding human existence (Tuffour, 2017). Sartre emphasised that humans do not have an underlying essence one can come to know but are constantly evolving and striving to construct a sense of self; in this sense, human nature is more about 'becoming' than 'being' (Langdridge, 2007; Smith et al., 2022). Existentialism is key for my research given that prior research exploring CYP's feelings about climate change indicates that it is seen as having existential importance relating to freedom, choice and responsibility (e.g., Hickman, 2020; Thompson et al., 2022).

2.2.2 Summary

Here I have described some of the fundamental ideas of the key figures in phenomenology.

Phenomenology has impacted the knowledge I hope to create; I aim to create phenomenological knowledge as I am interested in how each participant subjectively experiences climate change. By experience, I mean an attempt to understand someone's relationship to the world, a relationship that is embodied, evolving, and inextricably connected to its context (Smith et al., 2022). Drawing on key ideas from phenomenology, my attempts to understand their experience are interpretative as I am not an isolated individual but am similarly inseparable from my unique context. I have drawn on the main concepts of phenomenology throughout my research, including the research aims and questions (as the primary research question is interested in how CYP are making sense of and making meaning from their experiences of climate change), the interview questions (the key questions centre on the participants' experiences) and the analysis (through the development of individual and group-level themes aiming to reflect the participant's experience).

2.3 Interpretative Phenomenological Analysis (IPA)

Methodology refers to the techniques employed to obtain or create the type of knowledge sought and this stems from the researcher's ontological and epistemological positionings (Krauss, 2005). IPA is a qualitative and experiential approach concerned with how individuals subjectively make sense of meaningful life experiences (Holloway and Todres, 2003; Smith et al., 2022).

IPA is informed by and aligns with a phenomenological positioning because phenomenology is concerned with understanding human experience and IPA aims to gain insight from individuals' accounts of personal lived experience. IPA is also underpinned by hermeneutics and ideography. Here I discuss these in turn before providing a rationale for using IPA, its limitations, and consideration of alternate approaches.

2.3.1 Hermeneutics

Hermeneutics is one of the foundations of IPA and refers to the art and science of interpretation (Tuffour, 2017).

Phenomenological inquiry is fundamentally interpretative because it is not possible to understand another's experience by extracting it from their mind (Smith et al., 2022). In IPA, the researcher is involved in a double hermeneutic; there are two layers of interpretation as

the researcher attempts to make sense of the participant's sense-making (Smith et al., 2022; Tuffour, 2017). The participant and researcher can be seen as collaborators in the sense-making process. Given the central role of the researcher in the interpretation of the participant's experiences, I must read between or beyond the lines to seek a richer, deeper interpretation (Tuffour, 2017).

As the researcher, it is crucial to think about how much of the participant's original meaning I can access (Smith et al., 2022). Recognising I cannot be objective, the only way I can access participants' experience is through my fore-conception (my prior experiences and assumptions) (Shinebourne, 2011; Smith et al., 2022). Thus, it is important I critically reflect on how my fore-conception may have influenced the research (Finlay, 2008) (e.g., refer to my Position Statement). Smith et al. (2022) emphasise it may only be through the interpretation process that the researcher becomes aware of their fore-conceptions. So rather than 'bracketing' all assumptions before interpretation, the process is more dynamic and relates to reflexive approaches in qualitative research more broadly (Smith et al., 2022).

Smith et al. (2022) emphasise the hermeneutic circle as a central concept in hermeneutic theory. This explores the dynamic relationship between the parts and the whole; to understand the whole during interpretation, look to the parts and vice versa (Smith et al., 2022). This operates at various levels, for instance, to understand an extract of data look to the interview and to understand the interview look to the research project and vice versa (Smith et al., 2022). This has implications for the IPA researcher relating to how they engage with their data. Whilst guided by a series of steps during data analysis, I did not follow them rigidly. Data analysis was instead a flexible process, whereby I accessed meaning at different levels in a back-and-forth fashion seeking part-whole coherence.

2.3.2 Ideography

While nomothetic approaches centre on making generalisable claims at the group or population level (Smith et al., 2022), IPA is committed to an ideographic approach, which refers to a focus on the particular in terms of depth of analysis and level of detail.

Nomothetic approaches to exploring human behaviour tend to have large sample sizes, using statistical analysis to make inferences. Smith et al. (2022) highlight flaws in this research approach as human experience is reduced into numbers, and the data is accumulated and transformed, resulting in probabilistic, generalisable claims via the

construction of humans who have never existed.

In contrast, IPA prioritises an ideographic approach to provide detailed analysis of the phenomenon of interest (Tuffour, 2017). Care is taken with each case to ensure each participant's perspective remains central to the research (Smith et al., 2022). After a thorough analysis of each case, I make cross-case comparisons, however I do not make generalisable claims. Instead, I explore convergence, divergence, patterns, and connections within and between cases to explore how this group of CYP are experiencing climate change. The process of theoretical transferability continues as I then begin to explore the implications for educational psychology.

2.3.3 Rationale for Choosing IPA

Based on the research topic, research questions and research philosophy, a qualitative approach was considered most suitable. Qualitative research designs are concerned with meaning and what it is like to experience something, whereas quantitative research seeks to quantify data to make generalisations (Willig, 2013). Qualitative approaches tend to embrace the complexity of the human condition. In alignment with a qualitative approach, my primary research question is concerned with the quality and texture of subjective experience.

I opted against a quantitative research design based on prior research in the field; as highlighted in the literature review, research into CYP's views towards climate change is predominantly survey-based using quantitative or mixed-method designs. Although such large-scale surveys help identify how many CYP are concerned and the kind of concerns they have, they do not fully capture the complexities or nuances of their experiences. As a result, I felt an in-depth study focused on gaining deeper insights into individual perspectives would be valuable.

After weighing up different qualitative research methodologies, I decided IPA, a popular research approach in applied psychology (Reid, Flowers & Larkin, 2005), was most suitable. As discussed previously, IPA is underpinned by phenomenology, thus coherent with a phenomenological philosophical positioning. This methodology also aligns with my primary research question as it is exploratory rather than theory-driven, which is typical for IPA studies, and focuses on how individuals subjectively make sense of their experiences (Smith et al., 2022). Furthermore, IPA is particularly concerned with experiences of experiential or existential importance, which seems particularly apt considering prior research exploring

CYP's feelings about climate change (e.g., Hickman, 2020; Thompson et al., 2022). Given the participants are engaged in climate action, it is likely the way they are making sense of climate change will be of experiential importance (Dennan, 2023).

2.3.4 Consideration of alternate approaches

I considered several qualitative methodologies before choosing IPA. I deliberated using a narrative approach; a narrative perspective suggests that humans are natural storytellers, making sense of experiences through telling meaningful stories (Elliot, 2005; Willig, 2013). Thus, in narrative research, participants use language to construct detailed accounts of personal experience and, through doing so, it is suggested this helps individuals understand themselves and their experiences (Elliot, 2005; Willig, 2013). Choosing this approach would have allowed me to hear individuals' narratives around climate change and how they are making sense of their experiences based on the content of their stories and how they tell them. However, I wanted to be more interpretative, going beyond the participant's accounts, and I also wished to compare individuals' experiences by looking for patterns of convergence and divergence. I felt identifying shared and unique features would be helpful to gain a broader understanding of how CYP are experiencing climate change. However, in a narrative approach, it is not typical to place such an emphasis on an interpretative element in the analysis, nor to include a cross-case analysis (Willig, 2013).

I also considered using descriptive phenomenology which draws on transcendental or Husserlian phenomenology. This approach focuses on bracketing and minimising interpretation to study structures of consciousness (Willig, 2013). Whilst IPA is similar in that it is interested in exploring and understanding the participant's life-world, IPA recognises an interpretative element is always present because we cannot directly access the consciousness of another. IPA acknowledges the impact of the researcher-participant interaction and the impact of the researcher's context (e.g., prior experiences and assumptions) upon the way the researcher makes sense of participants' experiences (Willig, 2013). This reflexive approach to knowledge production is important to me. IPA also aims to move beyond mere description and develop it further, relating the participant's description to the wider context at a more conceptual level (Larkin, Watts & Clifton, 2006).

2.3.5 Limitations of IPA

A major criticism is that IPA does not pay due attention to the importance of language

(Tuffour, 2017; Willig, 2013). In IPA, the primary way researchers explore participant's experiences is through their accounts, which assumes language is a tool to capture and translate that experience (Willig, 2013). However, it could be argued language is not merely a tool to convey understanding, but that it constructs understanding; for instance, the words selected to describe a situation construct a version of that situation (Willig, 2013). However, Smith et al. (2022) assert that whilst IPA focuses on understanding experience, it is assumed that language is already interwoven with experiences as meaning-making occurs within the contexts of narratives and discourse.

A different criticism of IPA relates to how successfully participants can articulate their experiences (Willig, 2013). IPA is less interested in people's opinions about, or hypotheses of, the phenomenon in question, but aims to understand what it is like to live in a particular moment or experience (Willig, 2013). This relies on individuals to be adept at using language to effectively convey textures of their experience and therefore limits who would be suitable for an IPA study. However, I have incorporated visual methods to support participants reflect on their experiences and, in turn, help them articulate their thoughts during the semi-structured interview.

Another criticism links to IPA's focus on description rather than explanation (Willig, 2013). IPA is interested in people's perceptions of how they are experiencing the world, therefore the focus is on understanding individuals' lived experiences and does not seek to unearth why the event occurred or why there may be differences between individuals' perceptions (Willig, 2013). In other words, phenomenological research attempts to describe lived experience rather than explain it, which arguably limits understanding of the phenomenon (Willig, 2013). However, Smith et al. (2022) assert the analysis allows for the exploration of individuals' contexts and cultural positionings. In this research, I aim to show awareness of the cultural, historical, social, economic, and political contexts which produce such experiences. This is pertinent given that experiences of climate change are enmeshed within the current context (e.g., the UK government's changes to environmental policies).

2.4 Procedure

2.4.1 Sample

Purposive sampling was used, as is characteristic of IPA research (Willig, 2013). This allows for selection of participants based on characteristics or a perspective they have about the

phenomena of interest (Palinkas et al., 2015).

To select participants, I used the following inclusion criteria:

- Students aged 13-16
- Part of a climate-action group at school

This meant the sample was reasonably homogonous, in theoretical alignment with the principles of IPA. A degree of homogeneity enables an analysis of the commonalities and variability within the group (i.e., researchers can explore patterns of convergence and divergence) (Smith et al., 2022). The sample was recruited from a school in Northern England and thus is situated within a Western cultural context.

The inclusion criteria were selected for practical and theoretical reasons. Secondary-aged students were selected as they may have a greater interest in global issues and a deeper understanding of consequences of climate change (Ojala, 2023b; Vergunst & Berry, 2022). Further, adolescence is noted to be a formative period, where individuals develop cultural-political perspectives, abstract thinking and awareness of justice and responsibility (Christie & Viner, 2005; Vollebergh, Iedema & Raajimakers, 2001; Vergunst & Berry, 2022). It was also necessary that participants could articulately convey the quality and texture of their experiences. Furthermore, the use of a technological application (i.e., Google Jamboard) meant participants needed to be above 13 years old because of the Children's Online Privacy Protection Act (Federal Trade Commission, 2013).

It was important for participants to be part of a climate-action group as this suggests an interest in climate change and provides a means of accessing participants with potentially increased investment in the research. The group could also act as a circle of support, should partaking in the research cause difficult feelings related to climate change to surface or increase. There appeared to be an increased existence of such groups within the secondary age range in the local region - an additional motivator to recruit from secondary schools. CYP in climate-action groups also have an existing relationship with climate change and therefore they may feel more hopeful or empowered than others.

It is also important to address potential biases in recruiting from such a group. These individuals may be exposed to pro-environmental discourse within the familial home, may not have more prescient needs to occupy them (e.g., food/housing insecurity) and may perceive themselves as possessing power in addressing climate change, which could relate

to certain privileges (e.g., class, wealth, race).

As IPA is concerned with understanding phenomena within certain contexts, Smith et al. (2022) recommend small sample sizes. This adheres to the principle of taking an idiographic approach; human phenomena are complex; thus, a detailed analysis of each case is required to provide a rich and thorough account of an individual's experiences. Furthermore, whilst IPA research aims for theoretical transferability, it does not seek empirical generalisability (Hardy & Hobbs, 2017; Reid, Flowers & Larkin, 2005). Therefore, in IPA studies quality of data is prioritised above quantity, with studies typically benefitting "from a concentrated focus upon a small number of cases" (Smith et al., 2022, p. 46).

The final sample comprised three males aged 13-16. Smith et al. (2022) recommend six interviews for professionally taught doctorates, however, three to six are deemed acceptable for student projects (Smith et al., 2009). I aimed for a sample size of six, however recruitment issues meant this was subsequently revised. A sample size of three can be justified, as guidance suggests single-case studies are acceptable in IPA if data is rich and meaningful (Nizza, Farr & Smith, 2021; Pietkiewicz & Smith, 2014) and indeed single-case studies using IPA methodology have been published in peer-reviewed journals (Bramley & Eatough, 2005; Eatough & Smith, 2006). Further, visual methods were used to support participants to explore their experiences before a semi-structured interview. This required an additional session and ongoing engagement over a few weeks, thus I argue a smaller sample was adequate due to the larger commitment required from participants, as well as the additional time required for managing the project. Despite feeling frustrated by the small sample size, by February 2024 it was no longer feasible to continue the recruitment process.

2.4.2 Recruitment process

To recruit participants, I initially contacted EPs within my placement's Local Authority (LA) to identify whether any secondary schools for which they are the link EP had climate-action groups. I then disseminated a poster summarising the research to either the school's SENCo or the staff member responsible for running or coordinating the group (see Appendix 2). I subsequently held a meeting with the co-ordinator of the climate-action group at a secondary school which expressed an interest in the research project, and they decided to proceed. Parent/carer and CYP information sheets (see Appendix 3) and consent forms (see Appendix 4) were shared with the school, and these were distributed to CYP who met the

inclusion criteria and expressed an interest in the research project. It was made clear that parents/carers and CYP could contact me at any point to ask questions about the research. I then met with CYP who returned the completed consent forms at school to discuss the research further.

2.4.3 Use of visual methods

Visual methods include the use of film, photographs, drawings, and paintings and these can be analysed discretely, or used to stimulate verbal data which may subsequently be analysed using other methods (e.g., IPA) (Willig, 2013). The use of such approaches in psychology is increasing in popularity as they can give unique understandings or insight into phenomena (Bolton, Pole & Mizen, 2001; Willig, 2013). Visual methods are creative and afford participants greater freedom in being able to 'show' their experiences (Reavey, 2012) as well as support participants in making sense of their experiences (Veale, 2005). The use of visual methods encourages active participation, which can support participant's sense of agency and their engagement (Bartoli, 2020; Hill, 2013). The use of visual methods alongside an interview is particularly supportive for CYP, as it can aid attention and communication and subsequently support access to detailed accounts of the phenomenon (Julien, Given & Opryshko, 2013; Literat, 2013). It can also help CYP feel more comfortable as the focus is on the visual rather than the participant (Julien, Given & Opryshko, 2013). The use of visual methods is particularly effective within IPA research because it helps guide discussion away from closed questions and supports the researcher in gaining insight into participants' life-worlds (Bartoli, 2020; Willig, 2013). Visual methods can help to "express difficult and elusive emotions", giving "shape and voice to ideas and experience" (Bartoli, 2020, p.14).

It is also important to note visual methods present specific ethical challenges (Willig, 2013) (e.g., relating to anonymity and informed consent); see 2.4.6 *'Ethical Considerations'*.

Over 3 weeks, participants created either a physical 'scrapbook' collage or digital collage using Google Jamboard. They were asked to add to it every time climate change entered their mind, to represent their feelings at that moment. The addition could consist of a word, phrase, photograph, drawing, image, symbol, or colour. By the end of the 3 weeks, participants had formed a collage intended to reflect how they felt about climate change. The material within the collage was not analysed but used to elicit verbal data. Participants

brought the collage to the semi-structured interview as a guide or springboard for discussion. One participant opted to create a physical collage and two opted for a digital collage. Please see Appendices 5-7 for the collages.

Incorporating visual methods felt important to me as it struck a chord with my child-centred values. Participants seemed to particularly enjoy this aspect, with one participant noting the creative element inspired their involvement. Increasing participants' active involvement supported me to feel I was researching 'with' as opposed to 'on' participants. I hoped giving a choice of preferred media would increase their sense of agency.

The use of visual methods also seemed to add value to the research. The creation of the collage meant participants had already spent time reflecting on their thoughts and feelings towards climate change and making sense of their experiences which seemed to aid the discussion.

2.4.4 Semi-structured interviews

Following the creation of the collage across 3 weeks, I interviewed each participant individually at school. The interviews followed a semi-structured format and lasted up to an hour, which I recorded using a Dictaphone.

As IPA is concerned with accessing rich accounts of individuals' experiences, it is important the method of data collection allows enough flexibility for participants to elaborate on their ideas and enables participants to express themselves openly and reflectively (Smith et al., 2022). While there are various possible methods for data collection in IPA (e.g., observations, diaries etc) (Smith et al., 2022), I decided on in-depth individual interviews as these allow the researcher to follow-up on points of interest and ask further probing questions. The researcher can respond to participants in the moment and be actively involved in deciding upon lines of enquiry and the depth of data collected (Smith et al., 2022).

I used a semi-structured format for the interviews, typically the most popular approach in IPA research (Reid, Flowers & Larkin, 2005). Highly structured interviews with closed questions are generally less suitable for IPA research as these approaches can have more of a narrow focus which may restrict discussion. A less structured approach means the interview can be

more participant-directed, allowing things that are important to the participant, which the researcher may not have predicted, to surface (Smith et al., 2022).

While an unstructured interview would also have been appropriate, Smith et al. (2022) suggest it can be advantageous for less experienced IPA researchers to use a semi-structured interview format. In a semi-structured interview, an interview schedule is created in advance which means the researcher can consider key questions informed by the research question and reflect on the challenges they may face and how they will respond to these. The interview schedule can then act as a guide for the interview, allowing the researcher to be more present and actively listen (Smith et al., 2022).

The interview schedule was developed following guidance provided by Smith et al. (2022). It was important to ensure interview prompts were aligned with a phenomenological approach and centred on the participant's 'experience'. Considering this, I adopted a curious perspective, following up on participant's commentaries by pursuing areas of phenomenological significance, for instance by asking 'How did you make sense of that?' or 'I'm wondering what it is like for you to think/feel that?'. See Appendix 8 for the interview schedule.

Meeting each participant individually before the interview seemed to support the interview process, as I felt more at ease and sensed participants did too. As a less experienced IPA researcher, having an interview schedule relaxed me, which seemed to support my interactions with participants. I noticed that during the pilot and first interview, I found it difficult to reflect on the experience as it was happening (reflection-in-action) and, instead, found myself considering afterwards what I would do differently in the future (reflection-on-action) (Schon, 1983). For instance, when a participant made references to 'we' and 'they', I did not pick up on this immediately. However, I later wondered 'who do they mean by 'they'?'. It seemed I was initially prevented from being able to be 'in the moment', because I was considering my body language and reactions, ensuring the recording device was working, checking timings, referring to the interview schedule and checking the participant seemed comfortable. However, this shifted slightly as I progressed onto my second and third interviews, which meant I could act on my reflections and ask pertinent follow-up questions.

To uphold a reflective approach, immediately after each interview, I recorded entries in my research diary, see Appendix 9 for an excerpt.

2.4.5 Overview of Sessions

This research went through several phases, beginning with informed consent. An initial session was held with each participant before the semi-structured interview to help participants feel comfortable with the researcher (myself) and the research. Refer to Figure 1 for a summary of the procedure. Within each session, I referred to a checklist (see Appendix 10) to ensure I carefully followed the procedure.

Session 1:
After gaining informed written consent from the participant and their parents/carers, I held an initial meeting with each participant at school. This session aimed to develop a rapport with the participant, discuss the research further to help them feel at ease with the process, answer any further questions and discuss whether the participant wished to create a digital collage using Google Jamboard or a physical scrapbook collage. This session lasted approximately 20 minutes. Consent was gathered continuously.

One participant opted to create a physical collage and he was given the materials for this within this session (e.g., a notebook, sticky pads, scrap pieces of paper, glue). Two participants opted to create a digital collage. They were given the link to their Google Jamboard within this session and I demonstrated how they could edit it using an electronic device.

Participants were instructed to add an artefact (e.g., a drawing, photo, word, phrase, image, symbol, or colour) to the collage whenever climate change entered their mind, representing how they felt in that moment, so that over 3 weeks they developed a collage reflecting how they felt about climate change.

Between Session 1 and 2:
Between Sessions 1 and 2 each participant developed their chosen collage over 3 weeks. Participants with a digital collage could access the link to their Google Jamboard via a laptop or computer.

Session 2:
In the second session, I facilitated a semi-structured interview with each participant. The collage was used to guide discussion as participants were asked to discuss their thoughts and feelings about each artefact on the collage. The semi-structured interview was audio-

recorded, and consent was gathered continuously. Immediately following the interview, I conducted a follow-up discussion with each participant to assess their feelings, review their experience of the interview and research process, and determine if they wanted any information withdrawn. Each interview lasted no more than an hour.

Dissemination of findings (optional):

This is an optional session aiming to feedback research findings to participants. This will take place post-viva. During this session, I will meet each participant individually, share my thoughts about their experiences, and ask if they would like to be involved in sharing the group-level findings (e.g., with their climate action group). The extent to which participants are involved will be their decision.

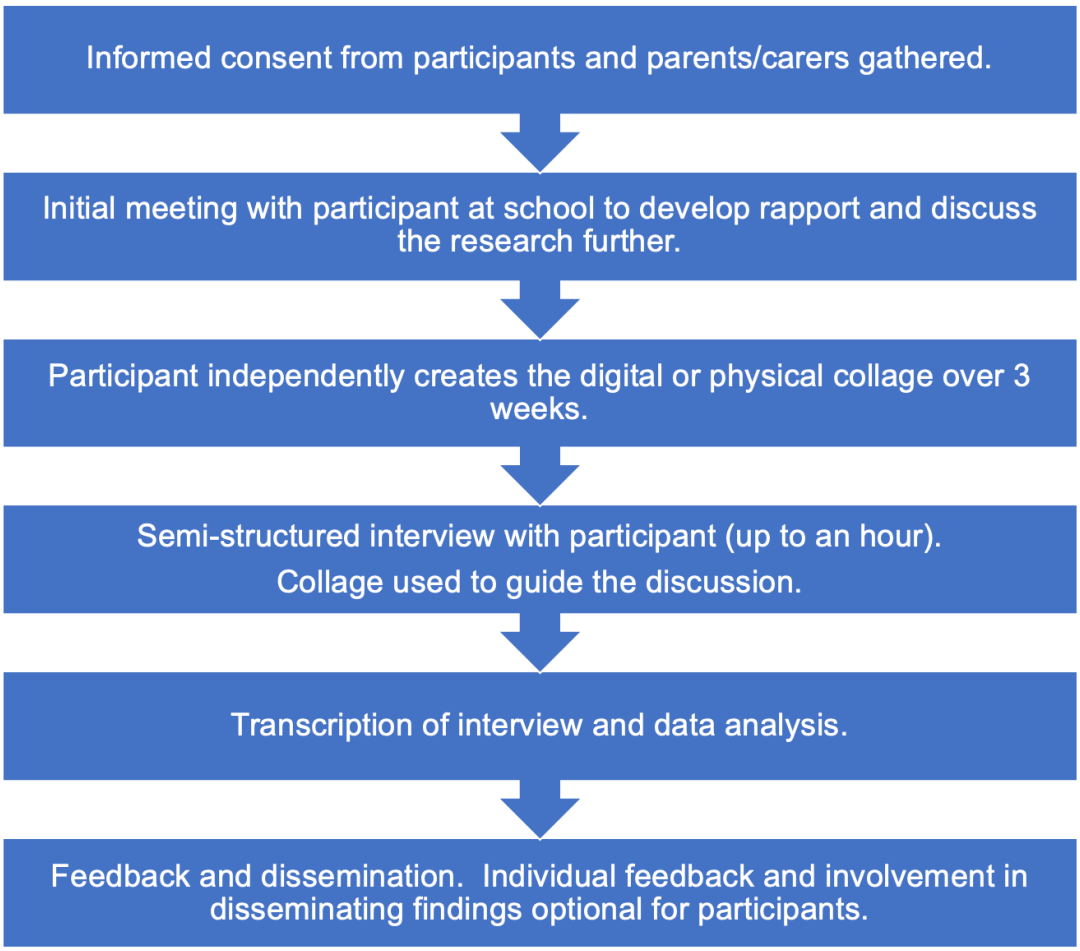

Figure 1. The phases of the research process

2.4.6 Ethical Considerations (Informed Consent; Protection, Well-Being, and the Right to Withdraw; Confidentiality and Anonymity)

Ethical issues were given utmost consideration throughout. I drew on the BPS Code of Human Research Ethics (2021) guidance to inform my decision-making. Ethical approval was gained from the University of Sheffield's ethics committee before recruitment, the receipt of which can be seen in Appendix 11.

As participants were below 18 years old, they were considered a vulnerable group. Additionally, given that previous research has highlighted CYP's concern about the climate (e.g., Boyes et al., 2014; Children's Commissioner, 2021; Hickman, 2021), I recognised taking part in the research project could result in climate change occupying participant's minds more than usual, potentially heightening or exacerbating these worries or concerns. This is particularly important given climate change concerns appear to be rising (Friends of the Earth, 2020) and that, for some CYP, climate change concerns are having a functional impact on their daily lives (Atherton, 2020). As a result, it was important to mitigate any potential harm and ensure appropriate protection and well-being of the participants.

One criterion for partaking in the research was participants belonging to a climate-action group in school as it was felt the group could offer some support or containment if difficult feelings arose. A named key adult (the staff member responsible for the climate action group) was also identified to provide any follow-up support if required.

So that the students could give informed consent, I provided accessible age-appropriate information sheets (Appendix 3) and consent forms (Appendix 4) explaining data collection, storage and sharing, as well as the benefits and risks of taking part. I also ensured they had opportunity to ask any questions about the research. Participants and parents/carers were given the contact details of myself and my research supervisor so they could contact us at any point throughout the research if they had any questions, issues or concerns. Were a parent or teacher to contact me regarding concerns about a participant engaging in the research, I planned to discuss their concerns with them and review whether it was appropriate for the student to continue participation. If there were concerns over a student's wellbeing, I also planned to signpost relevant resources/support and offer to deliver a workshop around self-care tips for worry/anxiety around climate change to the eco-action group at school.

Whilst I obtained informed written consent from both parents and students at the beginning of the research process, informed consent was seen as an ongoing process. I checked participants were happy to continue at set points throughout and reminded them of their right to withdraw. Before the interview, participants were advised they were under no obligation to respond to questions they did not wish to and could pause at any point. Participants were also given a red card to indicate they felt uncomfortable if they did not want or feel able to verbalise this, or if they wanted a break. No participant turned over their card for the former, however, if they had I would have immediately halted the interview, provided emotional support, and reminded the participant of their right to withdraw.

During the interviews, I was also sensitive to non-verbal cues (e.g., withdrawn body language, lack of engagement such as looking out of the window) that could indicate the participant wished to withdraw from the research. If I felt a participant had a strong emotional response or appeared distressed, I intended to stop the interview and respond in a supportive manner. The risk of distress was further reduced because, from my doctoral training and prior work as a primary school teacher, research assistant and assistant psychologist, I am experienced at conducting interviews in an attuned way as well as listening and responding to children with empathy. At the end of each interview, I held a debriefing conversation to check in with how they were feeling. Participants were reminded of their right to withdraw their data up to 7 days post-interview, at which point data analysis would have started.

A different potential risk to the participants related to their creation of a collage. As the research required the participants to add an item to their collage when climate change came to mind, this meant teachers/parents may not always have been present during the collage creation. This presented the possibility that participants could spend long periods creating the collage instead of completing other activities (e.g., school tasks). This risk was mitigated by reminding the participants during the initial meeting not to make additions to the collage during lesson time, so the research had minimal impact on their schooling.

To maintain participant confidentiality, real names were not used. Participants were asked to choose a pseudonym to retain a sense of ownership over their digital collages and words. Subsequently, when transcribing, analysing, and reporting on the data, the selected pseudonyms were used. The use of visual methods within the research presented specific ethical challenges. Any pictures or words included must protect the anonymity of participants and photographs of other people must not be used (Willig, 2013). As a result, any identifiers, or images of the participants or other people were not included within the final research,

except images of public figures.

2.4.7 Pilot study

Before data collection I conducted a pilot study with 'Raven'. The objective was to assess how they responded to the digital collage and review the semi-structured interview schedule. An additional benefit of the pilot study was that it enabled me to hone my interviewing skills. I felt this was particularly important given my limited experience in qualitative research, as my undergraduate and master's degrees focused on quantitative research. Using IPA as a methodology, it was particularly important to generate rich, detailed discussion as "a good interview is essential to IPA data analysis" (Smith et al., 2022, p. 55). Thus, to be able to give a thorough, in-depth analysis, I needed to elicit a rich account of the individual's experiences concerning their thoughts and feelings.

The pilot study informed my subsequent research decisions. See Appendix 12 for my reflections on this interview. Whilst I had initially planned for all participants to create a digital collage, technical issues meant Raven could not access the collage via a mobile device, which limited her engagement with the creation of the collage. As a result, I decided to give participants the option of creating a digital collage or a physical 'scrapbook' collage which would be discussed in the first session.

When I introduced myself to the pilot participant, I was unsure whether I should share my thoughts and feelings towards climate change. I wondered if sharing my stance may hinder the research, as it may shape what the participants share with me (e.g., participants may respond how they think the researcher wants them to). Alternatively, conveying to the participants that we have shared interests/beliefs could support them to feel more at ease. I decided to be transparent with the participant to an extent; it felt important to share that I have selected this research topic because it is of personal interest. However, I did not expand further upon my specific thoughts and feelings and in the interview, whilst I nodded encouragingly as participants spoke, I held back from agreeing, disagreeing, or elaborating on their comments.

I also felt conflicted whether to use the term 'climate change' or 'climate crisis'. Without realising, I had used the words 'climate crisis' on the parental information sheet and 'climate change' on the CYP information. Why did I do this? Was I subconsciously trying to shield

CYP from the seriousness of the situation? I decided to continue to use the same terminology in the interviews as I did not want a language change to provoke heightened emotional reactions.

2.4.8 Analysis

I recorded the semi-structured interviews with a Dictaphone. Each recording was uploaded onto the university's secure storage and the original audio file was deleted from the recording device, in line with the university's data protection policy.

After uploading the audio file, I transcribed the interview verbatim. Despite this being time-consuming, it felt important to fully immerse myself in the data. I conducted individual case analyses after transcribing each interview in line with IPA's ideographic principles before conducting a cross-case analysis.

To analyse the data, I followed the steps below, as proposed by Smith et al. (2022). However, I did not follow them in a rigid and prescriptive manner as IPA analysis is an iterative and inductive cycle (Larkin & Thompson, 2011). Smith et al. (2022) assert that researchers can take a flexible approach to data analysis, and it is of greater importance that the analysis is true to the fundamental principles of IPA. I attempted to do this by ensuring the analysis centred on making sense of individuals' experiences.

Being relatively new to IPA, I initially followed the steps in a more linear fashion than a more experienced IPA researcher, however, I noticed that as I gained familiarity and confidence with the approach, I became more flexible, moving back and forth between the steps.

Within the analysis section, I include reflective boxes to make the analysis process transparent. Within these boxes, I have included examples of reflections and decision points to expose my thinking and demonstrate how I have engaged with the data.

Step 1: First case - Reading and re-reading
I read and re-read the transcript while playing the recording so that as I read, I could visualise the participant speaking. Whilst I made some initial notes relating to the transcript, poignant observations, and thoughts from the interview, I focused on immersing myself in the transcript to enter the worldview of the participant.

Step 2: Exploratory noting

This step involved a thorough and detailed analysis of the transcript. Alongside primarily phenomenological comments which related explicitly to the participant's meaning, I also included more interpretative comments to help make sense of the meaning which required hermeneutic work (Smith et al., 2022). Smith et al. (2022) emphasise the importance that these notes are detailed and centred on the participant's experience, avoiding explanation or formulation.

Reflective box:

I found this stage quite freeing as I was able to be interpretative and make a range of notes without having to commit to a statement or theme. I noticed that even at this early stage I was already starting to notice some broader themes, however, I jotted down these thoughts separately, so they did not interfere with the exploratory noting.

I created a table as outlined in Smith et al. (2022) to assist this stage of the analysis, which was supportive as it enabled me to annotate alongside the transcript. See Appendix 13 for an excerpt of the exploratory noting from each participant's transcripts.

Step 3: Constructing experiential statements

In this stage, I mainly worked with the exploratory notes instead of the original transcript. I condensed the exploratory notes into experiential statements, with the challenge being to reduce detail while maintaining quality/complexity (Smith et al., 2022). In IPA, rather than being merely descriptive, each experiential statement must relate to the participant's experience (Smith et al., 2022). As each step includes more of the researcher's perspective, the experiential statements represent both the participant's sense-making and my interpretation, thus reflecting a collaborative effort (Smith et al., 2022). Refer to Appendix 13 for excerpts of the experiential statements alongside each participant's transcript.

Reflective box:

Throughout this process, I felt uncertain as to how much text should correspond with an experiential statement. For example, I initially separated the quote "It makes me feel hopeful that they'll take responsibility of helping like it'll not just be left to us. Yeah their kids and kids after that they'll help bring it back. Linking back, they might not, it's all unpredictable. They think they can predict what can come yet you really can't" into two separate experiential statements. The first experiential statement focused on hope and trust in others and the second on insecurity and fear of the future. However, after a period of deliberation, it felt important not to separate the quote as both parts seemed to be importantly related, as it pointed towards a fleeting sense of hope. As a result, I changed this to a single experiential statement 'Hope is fleeting: a sense of hope being shrouded by insecurity'.

I noticed a large amount of overlap between some of the experiential statements, so here I slightly deviated from Smith et al.'s (2022) approach by merging some of the experiential statements (i.e., having one exploratory statement that corresponds with several quotes). For instance, I initially had two very similar experiential statements for two separate quotes relating to a sense of guilt, however, I combined them so that two quotes correspond with the statement 'A sense of the preciousness of the planet contrasted with species guilt and betrayal'. This highlighted to me the importance of reflecting on the analysis process and flexibly using the analysis tool, rather than following it prescriptively.

Step 4: Searching for connections across experiential statements

Here, I searched through the experiential statements to look for patterns and connections I clustered experiential statements together to map out linked statements. Smith et al., (2022) note that some experiential statements may be discarded at this point, dependent upon the research question/s. See Appendix 14 for an image of searching for connections across experiential statements.

Reflective box:

I found this stage much quicker than the previous few stages, as the data had been reduced quite a lot already. Initially, I attempted to do this step on the computer, as I had with the previous steps, however, it proved challenging as there was much less space available in the visual field. I subsequently found it highly beneficial to do this step by hand (i.e., cutting up the statements and physically moving them between piles).

When sorting the experiential statements into PETs I moved them back and forth between the clusters of statements. For example, the statement 'Apprehension about the future of the planet; the situation feels precarious' was in PET B. 'A feeling of teetering on the brink, a fear of 'what will become of our futures", however, I deliberated whether it could have fit in with PET A. 'A sense of loss and grief concerning the environment' because the quote seemed to relate to anticipated losses. However, I ultimately decided that it should remain clustered within PET B because I sensed that the participant was experiencing an apprehension or insecurity about the future. I needed to revisit this stage a few times because when I adjusted the wording of some experiential statements so they were more reflective of the participant's experience, this altered the clusters I saw them as fitting within. This is an example of how I moved back and forth between the stages in a non-linear fashion.

Step 5: Naming the Personal Experiential Themes (PETs)

I then named each cluster of statements that best described it. These clusters are termed Personal Experiential Themes (PETs). The PETs are at the individual-person level, directly relate to the individual's experiences, and are a theme of the interview rather than relating to a specific part of the transcript (Smith et al., 2022). See Appendix 15 for an excerpt of the PETs for the first participant.

Reflective box:

I spent a long time analysing the data for the first participant; using IPA to analyse the data felt distinct from conducting a thematic analysis (an approach I was more familiar with) and more time-consuming. I noticed that it seemed to require a different way of thinking to drill down into the participant's experience. Throughout the data analysis, there were times when I felt I had a sense of the participant's experience, but that I could not quite articulate it, as though it was just out of reach. I decided that I would have to 'make do' with the language I had available to me, but this often felt like a poor substitute for the experience I was reaching for. Whilst here I sound dissatisfied, I enjoyed the creative challenge and mental stimulation of creating themes that were grounded in the text, interpretative and evocative. I noticed that incorporating direct quotes from the participant within each PET seemed to make each PET feel more emotive. Some PETs contained much fewer experiential statements than others, yet they felt significant, nonetheless. Unlike the examples of IPA studies I had previously seen, having sub-themes within PETs did not seem to fit. Whilst at times I felt pressure to produce an IPA analysis consistent with previous studies, I reminded myself to apply a flexible approach.

Step 6: Continuing individual case analysis

I subsequently systematically repeated steps 1 to 5 for the remaining participants. In keeping with IPA's ideographic principle, I attempted to not merely repeat ideas and instead be open to each participant's unique experiences and individuality (Smith et al., 2022), whilst acknowledging the irrefutable influence of previous themes identified. Refer to Appendix 16 and 17 for an excerpt of the PETs for the other two participants.

Reflective box:

As there were gaps in time between each participant's interview, I mostly analysed each interview in its entirety before moving onto the next. I felt this helped me completely immerse myself within each participant's interview and lent itself to IPA's ideographic tradition. At times I noticed myself identifying similar PETs and I interrogated myself whether these were points of convergence across participants or whether I was being too influenced by themes previously identified.

Step 7: Looking for patterns across cases

In this step I reviewed the PETs for each participant, analysing for convergence and divergence (see Appendix 18). I grouped these into clusters and named each cluster to form Group Experiential Theme (GETs). I looked back to each exploratory statement and original quote within each PET to check if it fit within the GET. Identifying patterns and connections draws attention to elements of shared experiences across participants and differences are also explored to highlight individual's unique experiences (Smith et al., 2022). See Appendix 19 for the final Table of Group Experiential Themes.

Reflective box:

I found this the most challenging step which seemed partially related to there being only three participants which meant there was a limited number of PETs to cluster.

Experiencing a sense of doubt, I questioned whether a sample of three could be large enough to do a cross-case analysis. I felt frustrated and it seemed to me that a larger sample size would lend itself better to identifying points of convergence and divergence. With only three participants, I considered forgoing a cross-case analysis and instead focusing solely on an ideographic approach, however, there seemed to be a degree of confluence between the participants' experiences thus I decided to do a cross-case analysis.

Reflective box:

I sought supervision at different points throughout the data analysis process, however I found this particularly valuable during the analysis of the first participant. Whilst I felt relatively at ease applying interpretation within the exploratory noting, I noticed that when I wrote the exploratory statements and PETs these were more descriptive. It was as though moving further away from the text and committing myself to a more interpretative exploratory statement felt somehow less safe or riskier; I was concerned that others may not be able to connect the exploratory statements to the quotes and I would be challenged on this. Here, I sought supervision and the reassurance I got from this gave me the permission I needed to be more interpretative. For instance, one of the initial PETs for the participant was 'Humans have a responsibility to the earth', however applying an interpretative layer to how the participant may be experiencing this I reworded this to 'Guilt, betrayal, and a deep feeling of responsibility to the Earth'.

Difficulty navigating the tension between being interpretative whilst staying close to the data remained a common theme throughout the analysis – it felt like a delicate balance, like walking a tightrope. For instance, with the quote "It's made me feel - why do it? Like why tear down pieces of land to be covered by concrete when you can leave nature in its place and let it be" I initially felt that the use of the word 'why' was perhaps indicative of sense of confusion, however then I felt that this was too descriptive and applying a more interpretative angle this seemed to point towards a sense of despair and exasperation. It helped me to remind myself that the 'I' in IPA stands for 'interpretative' after all and this ties in with existential philosophy (i.e., hermeneutics) (Langdridge, 2007).

2.5 Quality in Research

2.5.1 Quality in Qualitative Research

The criteria used to evaluate the quality of research must be compatible with the epistemological positioning of the research (Willig, 2012). Historically, traditional criteria including validity, reliability, and generalisability have been used to determine the quality of scientific research. However, these criteria are rooted in positivist epistemologies which aim to discover objective truths and do not easily translate to qualitative research (Willig, 2013). This led to the subsequent development of frameworks and criteria to evaluate qualitative research (Nizza, Farr & Smith, 2022; Willig, 2013). Many of the frameworks developed have overlapping features including considering reflexivity, documenting a clear account of decision-making, an awareness of the participant's contexts and the subsequent applicability of research findings (Willig, 2013).

I decided against using a checklist because these can be prescriptive, overly simplistic, and reductive (Smith et al., 2022). Instead, I have used Yardley's (2000; 2008; 2015) criteria for good quality research which considers four broad dimensions: sensitivity to context, commitment and rigour, transparency and coherence and impact and importance. Despite initially being developed in 2000, it remains relevant and widely used (Smith et al., 2022).

Within this section, I briefly outline each quality marker and consider how I met them in this research.

2.5.1.1 Sensitivity to Context

Sensitivity to context pertains to awareness of the context of relevant theory and literature as well as the socio-cultural context of the researcher and participants. In my research, I aim to demonstrate sensitivity not only to the literature around how people are making sense of climate change but also to the philosophical underpinnings of phenomenology and IPA.

I demonstrated sensitivity to context in IPA research by selecting participants from a particular context to represent a relatively homogenous group (i.e., students aged 13-16 who are part of a climate-action group at school). I demonstrated sensitivity to the socio-cultural context of the researcher by showing awareness of and reflecting on my own biases (see 'Position Statement'); being interested in climate change will have undoubtedly shaped my analysis and the conclusions I drew. However, IPA does not attempt to be objective. Instead,

I address my subjectivity by being transparent and adopting a reflexive approach. I document this by providing justifications and reflections throughout the main body of the text and by using reflective boxes in the analysis. I also demonstrated sensitivity to the socio-cultural context of the participants; for instance, as participants were part of a climate-action group, I showed awareness their interest in the topic area would likely impact their perspectives. Further, the way individuals are experiencing climate change is rooted in the current socio-cultural-historical-political context and so it was important to reflect on this. I did this by considering the political context of climate change and by emphasising the importance of CYP's context within 4.10 *'What can EPs learn from these insights?'*.

2.5.1.2 Commitment and Rigour

Commitment refers to engaging deeply with the topic, which I am doing not just by engaging with the literature and theory, but also because the topic is of personal interest to me as someone who cares about the environment. Rigour refers to thorough data collection and analysis.

I demonstrated commitment during the participant recruitment stage by persevering despite setbacks and I immersed myself in the data by transcribing each interview and re-listening to and re-reading participant's accounts.

I demonstrated rigor by conducting a pilot study which enabled me to refine my methods, ensuring I had an adequate sample size, using visual methods to enrich the data and providing a thorough analysis with sufficient depth and breadth. Further, when analysing the data I explored convergence and divergence between participants whilst remaining faithful to IPA's idiographic commitment by conducting detailed individual case analyses.

2.5.1.3 Transparency and Coherence

Quality research is transparent and coherent. Transparency refers to the clarity of the research including the data collection, analysis, and reporting. This is important to ensure the account is convincing. Coherence relates to the consistency between the philosophical positioning of the research, research questions, and methodology.

To demonstrate transparency I described and justified my decisions throughout the research process and ensured my interpretations are grounded in the data. I was reflexive throughout, which I demonstrated through using a reflective journal (e.g., see Appendix 9) and reflective

boxes throughout the analysis. I have included details regarding recruiting participants, developing the interview schedule and the stages for data analysis. I have also included extracts of raw data within my thesis, including quotes within the main body and extracts from interviews within the appendices.

To demonstrate coherence I outlined how a phenomenological philosophical positioning aligns with IPA and the experiential orientation of the primary research question. Throughout data analysis, I paid close attention to 'what it is like' for participants (i.e., how they are experiencing the phenomena) to ensure coherence with phenomenology and IPA.

2.5.1.4 Impact and Importance

Good quality quantitative research should be impactful and important at the theoretical level in terms of developing understanding and/or at the practical level, such as informing policy and practice. Ultimately, the research should influence the thoughts and actions of others.

As good quality qualitative research should have impact and importance at the theoretical or practical level, the topic of climate change felt pertinent given it is arguably the biggest threat humans are facing (Costello et al., 2009; Mann, 2009). It is especially relevant to EP practice, given climate change is a social justice issue and there are inter-generational inequalities, with CYP most impacted (Sanson & Burke, 2019; Thiery et al., 2021).

The second research question '*What can EPs learn from these insights?*' (Dennan, 2023) feels particularly relevant to impact and importance because, while my research does not endeavour to make generalisable claims, it is hoped that developing EPs' understanding of how some CYP are experiencing climate change will have a socio-cultural impact by changing the way EPs may think or talk about how CYP are experiencing climate change.

2.5.2 Quality in IPA

Given the diversity within qualitative research, the criteria used to assess the quality of research should arguably be tailored to the research epistemology and research method (Madill et al., 2000; Willig, 2013). While Smith (2011a, 2011b) initially produced a guide to judge IPA research by three quality levels (good, acceptable, or unacceptable), Nizza, Farr and Smith (2021) expand on this by detailing features of good IPA research and what this looks like in practice. Consequently, I have decided to also consider Nizza et al.'s (2021) four markers of quality IPA research: constructing a compelling, unfolding narrative, developing a

vigorous experiential and/or existential account, close analytic reading of participants' words and attending to convergence and divergence. Here, I briefly outline each quality marker and consider how I met them.

2.5.2.1 Constructing a compelling, unfolding narrative

The analysis should present a developing, coherent story within and across themes (Nizza et al., 2021). Coherence of the narrative is particularly important to the hermeneutic traditions of IPA (i.e., looking to the part to see the whole and vice versa) (Smith et al., 2022). Nizza et al. (2021) assert that within themes, quotes should be carefully selected and interpreted, with each additional quote furthering the narrative or offering an alternate viewpoint.

I met this criterion by selecting evocative, pertinent quotes to extend the narrative or demonstrate participants' differing perspectives (e.g., in the subtheme 'A fragile hope' I demonstrate that, whilst fragile, Jake seemed to experience a stronger sense of hope than the other participants). I also carefully considered the order in which to present the unfolding narrative. For instance, in the subtheme 'Nature feels precious and fragile' I began by exploring how Aaron seemed to experience the planet as being uniquely important. I then extended this by including Aaron's use of metaphor in which he likened the Amazon to lungs, indicating how essential he sees nature for human existence and thus further demonstrating how precious it feels to him.

2.5.2.2 Developing a vigorous experiential and/or existential account

IPA explores events that are important and meaningful to people, therefore quality IPA research pays close attention to the experiential or existential significance of participant's accounts (Nizza et al., 2021).

I developed an experiential account by ensuring data analysis centred on the participants' experiences. Individual and group-level analysis subsequently comprised themes of experiential and/or existential importance.

2.5.2.3 Close analytic reading of participants' words

In keeping with the ideographic commitment of IPA, it is important in quality IPA that the researcher closely analyses and interprets participants' words (Nizza et al., 2021).

To meet this criterion, I scrutinised participants' accounts and analysed them to explore their meaning. Within the results chapter I evidenced my interpretations of participants' words (e.g., where Redbull-Bob said 'but they don't realise' concerning the causes of climate change, I interpreted this to mean he feels he is more aware than others and this separation of himself from other people points towards a feeling of isolation).

2.5.2.4 Attending to convergence and divergence

IPA typically includes a cross-case analysis following detailed, careful analysis of individual cases (Smith et al., 2022).

In the cross-case analysis, I focused on points of convergence and divergence to demonstrate similarities and differences between CYP, thus highlighting patterns of connection and unique features (Nizza et al., 2021).

Chapter 3: Results

3.1 Overview

In the previous chapter, I outlined the data analysis process following steps suggested by Smith et al. (2022). This included in-depth analyses for each interview, followed by cross-case analysis. In this chapter, I present the seven identified overarching group-level themes. I explore connections, shared experiences in participants' accounts, and divergence. In doing so, I address the primary research question: *How are children and young people engaged in climate change action experiencing climate change?* (Dennan, 2023).

First, I provide a short vignette of each participant to give a broad sense of them. I then discuss each GET systematically as I attempt to make sense of the participant's lived experiences. I introduce each GET, describing and justifying it, before exploring each subtheme in more depth. In doing so, I hope to develop our understanding of what it is like for CYP to be experiencing climate change. Throughout the results chapter, I have included some reflective boxes to provide examples of how I made sense of and interpreted the participants' experiences.

Refer to Appendix 19 for the complete Table of Group Experiential Themes (GETs), an abbreviated version of which is below (see Table 1). Table 1 includes the title of each GET and subtheme (where applicable), an example quote for each theme or subtheme and a column containing participants' initials denoting their convergence in subthemes. I refer to participants using their pseudonyms, Jake, Aaron Nicholas and Redbull-Bob, and some location names have also been altered. In the subsequent discussion chapter, these results are explored in relation to previous research.

Table 1. GETs and subthemes following analysis of individual interviews (summarised version)

Group Experiential Themes (GETs)	Subthemes	Example quotes	Participant's convergence in subthemes
A. A sense of preciousness and being in awe of Earth – 'it's a sign of how beautiful our world is'	Appreciating and cherishing nature	"*It's a sign of how beautiful our world is and how much what's going off there all the thing that's bad for the environment and what we've still got. We've still got a beautiful earth. There's parts of it that's completely…nearly destroyed like the ice caps but if we stop all the carbon and all of that then it means that we've still got an earth to live on. And we've still got an earth to cherish…cherish basically*." (Aaron Nicholas, lines 341-347)	Jake (J), Aaron Nicholas (AN), Redbull-Bob (RB)
	Nature feels precious and fragile	"*There is no next earth*." (Aaron Nicholas, line 349)	AN,RB
B. A sense of loss and grief – 'we're destroying what we're living on'	A feeling that something has been lost	*"We're destroying what we're living on."* (Jake, lines 54-55)	J,AN
	A sense of anticipated loss	*"They've cramped largest cities, you will often see them be larger. Yes, for a rising population but soon they will have to build…build on that and it might make that city expand more, destroying more things".* (Jake, lines 43-46)	J,AN
		"Over thousands of years we've grown on this planet and evolved and...and now we're destroying it but we've done that ourselves. The	J,AN

C. A sense of guilt, betrayal and remorse – 'the planet is a gift but we're the burden'	A sense of species guilt	*planet has given us the gift of evolving and life but we're putting on it death and destruction, of everything to be honest, like with ice caps melting and all that like."* (Jake, lines 257-261)	
	Jake's sense of righteousness	"I*t's something we've got to look after. We've not just got to look after ourselves yet we've got to look after what's around us. It's not a burden but it's a gift…what we've been given*." (Jake, lines 247-249)	J
D. A sense of standing on the precipice: fear and insecurity of 'what will become of our futures'		"*Cause on one hand we could be alive and on the other we couldn't*". (Redbull-Bob, line 97)	J,AN,RB
E. A flicker of hope, a sense of possibility that 'fate is in our hands'	A sense of empowerment; positive change is within our grasp	"*I just thought, if the world leaders are changing it, then we can help as well".* (Redbull-Bob, lines 12-13)	J,RB,AN
	A fragile hope	*"It means we've got a chance to come back from the actions of what we have caused, of the land masses we've destroyed and bring back the nature that was there."* (Jake, lines 311-313)	J,RB,AN
F. A sense of threat: climate change		"*Well when I felt anxious it's because of err if the world leaders do sort it, it might turn into a even like worser war should I say than it already is. Because err if they're trying to make it more better and then they make eco*	J,AN,RB

	taps into other forms of destruction		*weapons that are more deadly and silent then it could cause a world war*". (Redbull-Bob, lines 17-21)	
G.	A sense of the other as an adversary – 'they should be doing a lot more'	A sense of suspicion and distrust	"*It's like they say they're going to do something better but they never do it."* (Redbull-Bob, lines 219-220)	AN,RB
		A feeling of powerlessness	"*Worse case scenario that they'll probably listen and by then the world will just be destroyed really*." (Aaron Nicholas, lines 200-201)	J,AN,RB
		A sense of injustice	"*it's just a way of saying well 'if we do this we don't care' um 'we're just we're protecting ourselves' that's all they want. Either they're doing it for self-protection or it's for greed."* (Jake, lines 272-275)	J,AN,RB
		Disappointment, frustration, and incredulity	"*It's just like why (do) people want to destroy it? I mean some people don't even think about what their actions could be if they do something that's bad for the environment*." (Aaron Nicholas, lines 378-381)	J,AN,RB
		A sense of aloneness	"*The government isn't listening. People in general aren't listening*." (Aaron Nicholas, lines 412-413)	AN,RB

3.2 General Reflections of each Participant

Here I have included a short vignette of each of my participants drawn from my reflective research diary. As I did not gather any demographic information beyond the inclusion criteria (i.e., aged 13-16 and part of a climate-action group at school), these reflections are instead based upon my high-level interpretations of each interview (i.e., overall impressions).

Jake

Jake was the first of the three participants I interviewed. Jake seemed very considerate, and I sensed it felt important for him to do a 'good job'. He seemed quiet and a bit nervous initially, however, he appeared to relax into the interview which meant he expanded on his responses more as the interview progressed. As he relaxed, his emotions also appeared to surface more readily, and I got a clearer sense of his frustration and anger directed towards others (e.g., when he referred to 'them' with disdain, almost disgust, and when he asked a rhetorical question through gritted teeth). Jake appeared to have a strong sense of justice, a clear sense of what is right and wrong, and the interview seemed to be an opportunity for him to address what he perceives to be an unjust, immoral situation. Jake was articulate and I was struck by the evocative and poetic language he used throughout. I had not anticipated feeling so moved and I incorporated his emotive quote "the planet is a gift but we're the burden" into the title of the thesis.

Aaron Nicholas

Aaron was friendly, very conversational and seemed at ease right away. Aaron seemed more emotionally hesitant than Jake, and the first thing he said to me when he showed me the collage was, "I had difficulty with the feelings part of it". This was particularly interesting given that his collage indicated intense emotional experiences, and I wondered whether this functioned to protect himself from emotional exposure and vulnerability. Aaron tended to speak quite quickly, particularly when he spoke about how not enough is being done and how he wants to see more action, which conveyed a sense of urgency. Aaron identified himself as being someone who thinks a lot about the future, however, Aaron's feelings towards the future seemed less hopeful than Jake's. Aaron seemed troubled by his perception that not enough is being done and there was a sense of resignation that by the time a change is made, it will be too little too late.

Redbull Bob

My final interview had a distinctly different feel to the other two interviews. Redbull Bob's

responses were much more concise, direct and to the point. As a result, I noticed that I asked follow-up questions much more frequently in this interview to prompt him to elaborate. This meant it felt more like a traditional interview (i.e., following a short question-response format), whereas the previous two interviews felt more conversational. Redbull Bob's responses tended to be polarised and more extreme, suggesting that the future is either going to be bright or bleak (e.g., "we could change it or we could destroy it", "on the one hand it's gonna be nice, on the other it isn't", "on one hand we could be alive and on the other, we couldn't"). As a result, his responses had an emotional intensity to them, and I felt surprised that he did not seem to experience more nuanced possibilities. Unlike the other two participants, he spoke about having ideas himself to reduce climate change and how he wants to 'push' himself to make a change. Redbull Bob's perspective seemed more revolutionary than Jake's or Aaron's (e.g., "Don't create electric cars just shut down the factories for making the cars cause there's plenty").

3.3 GET A. A sense of preciousness and being in awe of Earth – 'It's a sign of how beautiful our world is'

This GET broadly encompasses participants' experiences of feeling deeply connected to the planet and nature. Their descriptions conveyed a sense of wonder and reverence for Earth; the planet was seen as uniquely valuable, contributing to its specialness. This GET was split into subthemes 'Appreciating and cherishing nature' and 'Nature feels precious and fragile'. They relate to each other because participants reflected on the natural beauty and importance of the environment, including animals and ecosystems, in both subthemes. However, the subthemes are distinct because in 'Nature feels precious and fragile', the precariousness of the situation seemed to intensify the invaluableness of nature to participants.

There were some semblances between this subtheme and the subsequent GET 'A sense of loss and grief – 'We're destroying what we're living on'', as within both themes participants reflected on the destruction, or possible destruction, of the planet. However, within this theme, participants seemed to primarily experience a sense of respect and admiration for the planet, whereas the subsequent GET centres on a feeling that something *has* or *will be* lost.

3.3.1 Appreciating and cherishing nature

(Jake, Aaron Nicholas and Redbull-Bob)

There was not a complete sense of homogeneity across participants (i.e., there was divergence in their experiences). Therefore, I have included participants' pseudonyms in brackets below each theme or subtheme (see above) to reflect which apply to which participants (i.e., to show convergence in participants' experiences).

Appreciating and cherishing nature featured across all interviews. Participants appeared to experience a sense of admiration and wonder towards Earth within this subtheme. The aesthetic beauty of the planet and nature was mentioned several times.

Aaron seemed to take a macro-perspective, standing back, and experiencing a sense of awe and wonder at Earth's beauty as a whole:

> *"It's a sign of how beautiful our world is and how much what's going off there all the thing that's bad for the environment and what we've still got. We've still got a beautiful earth. There's parts of it that's completely…nearly destroyed like the ice caps but if we stop all the carbon and all of that then it means that we've still got an earth to live on. And we've still got an earth to cherish...cherish basically."* (Aaron, lines 341-347)

Here, Aaron described how Earth remains beautiful to him, despite environmental destruction. He emphasised and repeated that a beautiful Earth is something 'we've still got', indicating he clings tightly to this, desperately wanting this to remain the case. Aaron's use of 'cherish' felt important, indicating not only a sense of deep appreciation for nature but also a view that Earth should be nurtured and cared for.

Whilst Jake also seemingly experienced a sense of gratitude towards nature, he took a micro-perspective, relating his enjoyment and appreciation of nature to local places:

> "*Around Mapletown there are lots of housing estates and you can still see nature flourish and let it take its place in the world.*" (Jake, lines 114-115)

Describing seeing 'nature flourish' captures a sense of pure joy in observing flowers blooming and nature thriving. Adding that nature takes '*its* place' indicates Jake sees the land as belonging to nature, not humans.

Jake seems to treasure green spaces, and he described a sense of relief in seeing nature lacking in human interference, indicating a sense of delight alongside respect for the natural world:

> "*It makes me feel happy that we're still leaving place for nature to flourish and let it be*

without disturbing it." (Jake, lines 108-109)

Alongside experiencing gratitude that green spaces are left, Jake also expressed a sense of disappointment that others do not value nature as highly as he does:

> *"They...they want people to come in, come and see the country, see what it's like for their cities but not for the natural beauty."* (Jake, lines 36-38)

Whilst taking a macro-perspective, Aaron similarly experienced a sense of disappointment that others do not value or see Earth's potential.

> "*People don't see what Earth could be."* (Aaron, lines 380-381)

Aaron feels he sees the world differently from others; he sees 'what Earth could be' unlike others. This points towards a sense of admiration and wonder at Earth, as well as a longing for others to wake up and see the potential beauty of Earth. This therefore alludes to Aaron's experience of cherishing nature.

Redbull-Bob's appreciation of the environment had a slightly different quality, and, for him, it seemed related to a longing for it to stay 'as it is':

> "*I like the environment as it is and I don't want it to change as much, like impact it*." (Redbull-Bob, lines 33-34)

3.3.2 Nature feels precious and fragile

(Aaron Nicholas and Redbull-Bob)

Within this subtheme, participants appeared to experience nature as being precious *and* fragile, both of which appeared interrelated. The fragility of nature and the precariousness of the situation seemed to contribute to the unique value and specialness the participants saw Earth as holding. Participants referred to nature's life-sustaining functions as well as the impermanence of the planet, nature and its creatures.

Drawing attention to there being no alternative planet, Aaron stressed the unique importance and value of the planet:

> "*There is no next Earth*." (Aaron, lines 349).

Aaron also described the Amazon as being 'our lungs for Earth':

> "*And basically Amazon's our lungs for Earth.*" (Aaron, lines 270-271).

Likening a region of the world to a body part integral for breathing indicates how essential Aaron sees the Amazon for human existence and thus how precious it feels to him.

For Redbull-Bob, anticipated losses seemed to accentuate the sense of the preciousness of nature, and he focused on the potential impact on animals:

> "*Like if the climate change continues it'll impact the environment a lot more and it will hurt not just all the trees and us but other animals as well*" (*Redbull-Bob,* lines 36-38).

Redbull-Bob noted concern for animals several times and this appeared to relate to the importance of his relationship with his pets. Considering the impact of climate change on his pets seemed his way of making sense of and conveying the significance of what he thinks could happen.

> *"I was thinking about my pet animals. I have a cat and a dog and if it hurts them it's going to impact th-them and their health as well as everyone else's." (Redbull-Bob, lines 160-162)*

Redbull-Bob seemed to see animals as not to blame for climate change (i.e., innocent), yet suffering the consequences of human actions. Their vulnerability and the injustice of their suffering seemed to add to their preciousness and fragility.

Animals also seemed to emblemise the preciousness of nature for Aaron, but from a broader ecological perspective, rather than as a close family pet:

> "*Animals are probably...they basically are earth and if we destroy animals it'll destroy the Earth. And all the ecosystems will shatter including the human race*" (Aaron, lines 224-226).

Here Aaron describes a ripple effect that could happen if animals are impacted and how this could impact upon humans. The word 'shatter' here feels powerful and accentuates how delicate he perceives the situation, as well as how catastrophic he sees the potential effects as being. This alludes to nature feeling precarious and fragile to Aaron.

3.4 GET B. A sense of loss and grief – 'We're destroying what we're living on'

This GET incorporates participants' feelings of grief for current and anticipated ecological losses due to environmental changes. This is separate from the grief or loss of an individual, but rather closely relates to the concept of 'ecological grief'. Within this theme participants

described the ongoing destruction of Earth and the impact on nature, humans and animals. Whilst examples of this theme occurred infrequently throughout the interviews, it felt significant due to the emotive language and expression used by the participants.

This theme is distinct from the GET 'A sense of threat: climate change taps into other forms of destruction' because, whilst both relate to current and ongoing environmental destruction, within this theme participants' experiences centre around a feeling that something of value has or will be gone, whereas, in the other, participants seem to be experiencing a sense of impending danger and fear for the future concerning other threats to humanity (e.g., wars and weapons of mass destruction).

This GET was separated into two distinct subthemes: 'A feeling that something has been lost' and 'A sense of anticipated loss'. The former relates to participants experiencing a painful absence of something once present, no longer there, and the latter relates to participants' expectations of further losses and experiences of anticipatory grief.

3.4.1 A feeling that something has been lost

(Jake and Aaron Nicholas)

Within this subtheme, Jake and Aaron experienced a sense of loss and grief concerning environmental destruction.

> *"They've destroyed such…one big part of landmass, disturbing nature maybe and animal…species of animals certain to that location."* (Jake, lines 8-9)

Here, Jake's compelling use of language and past tense for 'destroyed' conveys a feeling of painful loss; something has gone forever and cannot be replaced.

Reflective box: *Listening to Jake describing nature as being 'destroyed' evoked feelings of pain and hurt in me. Although Jake did not use the words 'loss' or 'grief' to describe his experience of climate change, I interpreted it this way as a sense of a painful absence felt present to me.*

Aaron similarly seemed to experience a feeling of loss and permanence, describing how part of the environment has been ruined, possibly irreparably.

> *"It's been ravaged by warfare and emissions."* (Aaron, lines 393-394)

Aaron's use of the word 'ravaged' emphasises the extent and significance of the damage caused.

For Jake, this sense of loss extended to current losses, and he seemed to be experiencing a sense of distress and anguish relating to this.

> "*We're destroying what we're living on*." (Jake, lines 54-55)

The use of the present tense here for 'destroying' and relating the destruction to 'what we're living on' creates an image of homes being decimated. This seems to point towards Jake feeling a sense of urgency to prevent further loss.

3.4.2 A sense of anticipated loss

(Jake and Aaron Nicholas)

This theme relates to participants experiencing a sense of foreshadowed loss. Looking ahead, Jake and Aaron see destruction on the horizon and their descriptions convey a feeling they are anticipating further losses:

> *"They've cramped largest cities, you will often see them be larger. Yes, for a rising population but soon they will have to build…build on that and it might make that city expand more, destroying more things".* (Jake, lines 43-46)

> *"Basically the airs getting destroyed, emits more carbon which means the more global warming, more earth destruction basically."* (Aaron, lines 273-274)

Their use of the word 'more' concerning environmental destruction suggests further destruction feels inevitable to Jake and Aaron. This suggests they may have been experiencing a sense of impending loss and grief.

3.5 GET C. A sense of guilt, betrayal and remorse – 'The planet is a gift but we're the burden'

This theme relates to CYP's experiences of guilt that humanity has betrayed the planet and the weight of this responsibility. Two subthemes were identified: 'A sense of species guilt' and 'Jake's sense of righteousness'. They relate to each other because, in both subthemes, participants experienced a sense of being burdened, bearing the weight of responsibility for the climate crisis. However, the subthemes distinctly differ because the first subtheme relates to a sense of guilt and shame in humanity for making decisions that negatively impact the planet (e.g., consumerism) and our failure to act effectively to mitigate the impacts of climate change. In contrast, the second subtheme encompasses Jake's commitment and moral obligation he experiences to repair the damage humanity has

caused.

3.5.1 A sense of Species guilt

(Jake, Aaron Nicholas)

Jake and Aaron seemed to experience a sense of species guilt and shame concerning humans' impact on the planet. For Jake and Aaron, decisions we make negatively impact the environment and humanity is failing to mitigate the impacts of climate change. Their awareness that it is our actions harming the environment (i.e., seeing humanity as being responsible for climate change) alluded to a sense of guilt.

Aaron shared that he feels what is happening to the planet is humanity's fault:

> "*We're destroying our Earth which means that we're making everything worse for ourselves".* (Aaron, lines 352-353)

Using the word 'we're' rather than 'they' indicates Aaron sees himself as part of the problem, suggesting he may have been experiencing a collective or shared sense of guilt.

Jake similarly used the word 'we' to describe how he feels humanity has exploited the planet, yet neglected or failed to nurture the planet in return:

> "*We're using the planet to our own advantage yet we're not caring for it back*." (Jake, lines 58-59).

Later in the discussion, Jake expanded on this by contrasting the gift of life Earth has given humanity with the 'death and destruction' humanity has repaid nature with:

> "*Over thousands of years we've grown on this planet and evolved and...and now we're destroying it but we've done that ourselves. The planet has given us the gift of evolving and life but we're putting on it death and destruction, of everything to be honest*." (Jake, lines 257-260)

This stark contrast emphasises that Jake sees Earth as having given so much to humanity, yet humanity has only taken from Earth. This suggests not only guilt, but also a sense of betrayal. When Jake said, 'But we've done that ourselves', there is perhaps a sense of deservedness, that Jake believes humanity has inflicted this situation upon ourselves and deserves to reap the consequences.

Reflective box:

Prior to Jake's report he had commented that Earth is a gift, not a burden, which I then followed up by probing, 'Could you tell me a bit more about that…what's it like for you to feel like that?'. His response instantly moved me; he used such emotive and evocative language, conjuring the contrasting images of a nurturing, mothering planet, with uncaring, selfish humans as the planet's oppressors. It felt important to explore this more and so I followed this up by asking him 'I'm wondering what it must be like for you to know that we're the ones destroying it?' I experienced a sense of discomfort as I asked this; although I was reflecting the language he had used, I felt conscious that using the language 'we're' implied that he was equally responsible. I wanted to reassure him and explain that he had inherited the planet from my generation, unburdening him from this responsibility.

Aaron appears ashamed of humanity and is scathing in his remarks, which convey almost a sense of loathing:

> "*It's more like guilt that people aren't doing anything and guilt that we haven't done anything when we're supposed to be the superior race, when we're not. We should all be equal, and I think people are completely disregarding animals, completely."* (Aaron, lines 218-221)

Here Aaron's use of past and present tenses highlights he feels not enough has been done, nor is being done. His wording '*supposed* to be superior' suggests he believes humanity has not been acting in a way which warrants a superior sense of importance. Instead, he seems to imply the opposite; humanity's assumed superiority despite its immorality is shameful.

Aaron also seemed remorseful, expressing he felt more could have been done for the planet to prevent the current situation:

> "*It's anxiety and anger that it's…we could've done a lot more stuff to help what's going off now. (Inaudible) Like people wasting money on stuff that they don't need when it could be going to the environment."* (Aaron, lines 45-47)

Whilst he used the words 'anger' and 'anxiety' to describe his feelings, he appeared to experience a sense of regret. Aaron made a connection between consumerism and its environmental impact, and this appears to be driving his sense of species guilt here.

Interestingly, Jake seemed to experience a sense of anticipated guilt and regret when he contemplated decisions humans might have to make in the future to prevent animal species

from becoming extinct:

> "*Like what could happen to animals as well like? If…what will we do like will...will we have the decision to put them in cages and not let them run free?"* (Jake, lines 212-214)

Whilst Jake and Aaron predominantly described a collective sense of human guilt, Aaron also seemed to experience a sense of personal guilt following the realisation his actions have also contributed to climate change:

> "*I've recently gone on flights and it was a pretty long journey and I came back from it and I researched it and stuff for the Jamboard. That cropped up so I thought yeahhhh I've been a person who's done that. So yeah that made me pretty guilty..."* (Aaron, lines 243-246)

When Aaron said, 'I thought yeahhhh', he said this in an uncomfortable and embarrassed tone. A misalignment between his actions and values may have felt exposing for Aaron to divulge, evoking a sense of discomfort.

3.5.2 Jake's sense of righteousness

(Jake)

Jake appeared to experience a sense of righteousness and morality connected to the deep sense of responsibility he feels we have towards protecting Earth. Jake spoke with a tone of conviction, indicating he experiences this intensely or feels passionate about it.

> "*It's something we've got to look after. We've not just got to look after ourselves yet we've got to look after what's around us. It's not a burden but it's a gift…what we've been given."* (Jake, lines 247-249)

Expressing that it is not just about looking 'after ourselves', Jake seemed to be experiencing a profound sense of duty to something greater than ourselves. The use of 'we' suggests Jake sees this as a collective responsibility and, by saying 'we've *got* to', indicates he sees this not as a choice, but a moral obligation. In contrast, by subsequently highlighting that the planet is a 'gift', Jake seems to feel this is something people should want to do and not feel constrained by.

For Jake, the planet is being put under intense strain by humans, as he poetically describes Earth's tectonic activities as nature's way of 'releasing stress':

> "*It's not just thinking about ourselves it's thinking about nature like natures of every…everywhere. Tectonic activities, yeah, that is nature like releasing stress you could say."* (Jake, lines 242-245)

Jake feels humanity has acted selfishly and we need to put the best interests of the planet

ahead of personal desires. Here, he seems to be experiencing humility alongside a deep sense of commitment and duty to the planet.

3.6 GET D. A sense of standing on the precipice: fear and insecurity of 'what will become of our futures'

(Jake, Aaron Nicholas, Redbull-Bob)

Within this GET, a significant feature of each participant's descriptions was a feeling of insecurity and a fear of what the future holds. Participants conveyed concern that the situation feels precarious and danger feels perilously close, alluding to a sense we are standing on the precipice. No subthemes were identified, because when searching for patterns and connections across PETs, this GET seemed to encapsulate the essence of the participant's experiences and I was unable to meaningfully break it down further.

This theme has some overlap with the GET 'A sense of threat: climate change taps into other forms of destruction', as within both themes participants appear to experience a degree of insecurity about the future. However, this theme is distinct as it relates to environmental threats, rather than other forms of threat.

Aaron expressed concern relating to uncertainty about what could happen in the future due to increasing temperatures:

> "*So, the Earth is getting hotter, everyone knows that. It's it's kind of worrying what's could happen."* (Aaron, lines 8-9)

Jake similarly expressed apprehension about the future and, whilst he used 'confusing' and 'worry' to describe his feelings, his description appeared to point more towards a sense of fear of what the future may hold:

> "*It feels confusing 'cause I'm still young and it..if younger people know what's going on in the world it makes us worry what will become of our futures, what will we have to do.."* (Jake, lines 264-266)

Here Jake references being 'young' and how it makes 'us worry', suggesting he experiences a sense of shared worry amongst the younger generation. He also asks, 'What will we have to do?', suggesting he is not only concerned about what may happen but also preoccupied with the actions they may have to take.

Environmental existential threat featured within Jake's and Aaron's responses, and they appeared to be experiencing feelings of futurelessness. Jake referred to the 'doomsday clock', a symbol of how close humanity is to destruction, which he described as being at its 'lowest' in history. This implies he feels the situation is the worst it has ever been and alludes to a sense of insecurity and fear of the future.

> "*Have you heard about the about the doomsday clock? Er..it's a clock numerous scientists made to predict when the world will end and it's been at its lowest ever recorded in history. I can't..I can't remember when the last (inaudible) recorded but it's been I think it's been at 0.9 and that's the lowest it's been throughout recorded history."* (Jake, lines 158-163)

Aaron conveys a feeling that humanity is moving towards the possibility of an unalterable fate:

> "*And at the rate of it, volcanic eruptions like in Iceland is coming quite a lot. Like an apocalypse basically*." (Aaron, lines 2011-212)

For Jake, the fear he seemed to be experiencing about the future was accompanied by a sense of urgency to make changes before the situation becomes irreversible:

> "*With the way it's going, there's been predictions about certain animals going extinct in 2050, 2030 and all that. It makes you think that if…if something's happening to animals that used to have such a high population, what could happen to us over the years? We don't need to just focus on land/stupid reasons…we need to focus on people and the environment and what it's doing to the planet and the…and what the results could be like…yeah."* (Jake, lines 170-176)

Here, he related animal extinction to the possibility of humanity suffering the same fate. For Jake, peril feels imminent, and he conveyed a sense of urgency as he emphasised what humans 'need' to be doing. This feeling of urgency alludes to a sense that we are standing on the precipice.

Similarly to Jake and Aaron, Redbull-Bob's descriptions also conveyed a feeling of insecurity, however, uniquely, he presented a dichotomy:

> "*Cause on one hand we could be alive and on the other we couldn't*". (Redbull-Bob, line 97)
>
> "*On one hand it's gonna be nice, on the other it isn't*". (Redbull-Bob, lines 99-100)

Here, Redbull-Bob expressed a sense that two distinct possible futures lay on the horizon; 'nice' or the polar opposite. Perhaps for Redbull-Bob, the future feels out of control and using all-or-nothing language provides a greater sense of certainty during uncertain times.

Reflective Box

The lightness of Redbull-Bob's tone and the ease with which he said this seemed at odds with the seriousness of his message. This contrast caught me off guard and made me flinch. It shocked me that he could say this so flippantly. Perhaps this is because, unlike the younger generation, I have not had to grow up facing this reality?

3.7 GET E. A flicker of hope, a sense of possibility that 'fate is in our hands'

This GET relates to CYP's experiences of a delicate yet tangible possibility that positive change can happen. Whilst this sense of possibility was experienced to varying extents, each participant expressed some form of optimism, even if fleeting, implying none of the participants seemed to be experiencing a complete or overwhelming sense of hopelessness or helpless despair.

This GET consists of two subthemes: 'A sense of empowerment; positive change is within our grasp' and 'A fragile hope'. Both subthemes relate to the main theme because they broadly encompass participants feeling it is not too late and there is still a chance. Crucially, the subthemes differ as the former relates to participants experiencing a sense of agency concerning helping the planet, whereas the latter centres on participants' glimmers of hope towards the future.

3.7.1 A sense of empowerment; positive change is within our grasp

(Jake, Redbull-Bob, Aaron Nicholas)

This subtheme reflects participants' sense of empowerment and motivation to make positive change happen.

Aaron conveyed a sense of empowerment and agency to make change as he described a feeling of enjoyment or satisfaction in thinking about ways to help the climate:

> "*I like thinking about stuff that could help the environment so like stuff that could change cars and stuff like that*." (Aaron, lines 401-403)

Climate action is important to Aaron and perhaps engaging in this feels meaningful and purposeful to him.

Redbull-Bob similarly expressed a sense of personal empowerment. However, there was a greater intensity in his responses, conveying a feeling of passion and a sense that a spark within had been lit:

> "*It makes me feel that I I can push myself even more than I already am*." (Redbull-Bob, line 149)

The use of the words 'push myself' suggests he felt spurred on and galvanised to make positive change.

Reflective Box

I felt conflicted by Redbull-Bob's comment here. Whist I admired Redbull-Bob's commitment to 'push' himself, I wanted to be careful not to endorse this. I want CYP to feel empowered to make positive changes, however I want to be careful not to burden them with the responsibility to solve a problem they have not caused.

I found myself drawn to Redbull-Bob's embodied language; his description of pushing himself highlighted an interplay between the mind and body, deepening my understanding of his perspective. *I interpreted this to mean that he was feeling spurred to exert himself, as the word 'push' captures an experience of movement and energy.*

Whilst acknowledging uncertainty, Redbull-Bob's feeling of empowerment seemed resolute:

> "*I just (don't) know if I can or if I can't and I just try and try again*." (Redbull-Bob, line 154)

Here, he described persistently trying and not giving up, indicating a steely, unwavering determination to make positive change.

For Redbull-Bob, seeing politicians engaging in climate action also felt encouraging and perhaps even inspiring:

> "*I just thought, if the world leaders are changing it, then we can help as well*". (Redbull-Bob, lines 12-13)

Seeing others make changes supports Redbull-Bob to feel positive change is within reach.

Whilst he seemed to experience a firm sense of personal empowerment, Redbull-Bob also expressed doubt:

> "*The fate is in our hands and we can better the environment or we can just kill it*." (Redbull-Bob, lines 105-106)

> "*That we could do it, we can change the environment. But on the other...some people don't want to change it. So yeah."* (Redbull-Bob, lines 113-114)

Redbull-Bob believes change is within our control, which can be empowering but also obstructive. Here he seemed to be experiencing a tension between feeling empowered to make positive change and a tinge of disillusionment; he perceives individuals to have the power to enact change but is sceptical of their willingness.

Jake's sense of empowerment had a distinct quality to it. He seemed to experience a sense of optimistic possibility by describing how people are giving back to nature in small ways locally:

> "*Often gardens are small in areas like these...like these on housing estate. Yet people have made small places into places where they enjoy, yet still look after it like. It's their own thing, they want to make it proud like. And they're returning the favour bit by bit."* (Jake, lines 116-119)

For Jake, positive change is within our grasp if we take ownership of what is within our control.

3.7.2 A fragile hope

(Jake, Redbull-Bob, Aaron Nicholas)

Each participant seemed to experience a glimmer of hope that things could or will improve. Whilst fragile, the hope was experienced to varying extents at different points of the interview and across participants. At times the sense of hope seemed slightly stronger, whereas at others it seemed more delicate or was overshadowed with apprehension; consequently, this subtheme was termed 'a fragile hope'.

Whilst fragile, Jake's sense of hope appeared strongest. For Jake, hope is not lost, it is not too late and there is still 'a chance' to restore the environment:

> "*It means we've got a chance to come back from the actions of what we have caused, of the land masses we've destroyed and bring back the nature that was there."* (Jake, lines 311-313)

Interestingly, for Jake, looking to the past gave him hope for the future. Taking a macro perspective, he described difficulties the environment has previously faced, which humanity has overcome:

> "*You can see the effects over the course of history with like the great fire of London that causing such a large area to be burned and the sewage systems in London in the past being filling the River Thames up with horrible gunk and rubbish. It makes…it is the definition of hope – like we've recovered from that. We've…we've pushed through the struggle and recovered*". (Jake, lines 319-324)

> "*They can push through adversity as well like they've…there's been so much destruction yet they've pushed through and come back stronger*." (Jake, lines 328-330)

Reflective box:

Jake spoke with conviction here and I got a sense that he believed in what he was saying. Whilst I interpreted this to mean that he was experiencing a sense of hope, I felt trepidation. I could not shake the feeling that this hope seemed misguided and perhaps based on denial; whilst humanity has overcome previous difficulties, they perhaps have not been on the same scale as climate change.

Describing how humanity has 'pushed through' evoked a sense of a struggle, battling through and emerging stronger. The resilience of humanity provides Jake with a sense of optimism and possibility. For Jake, overcoming adversity 'is the definition of hope'.

Despite remaining hopeful, at times Jake's hope seemed more delicate:

> "*It makes me feel hopeful that they'll take responsibility of helping like it'll not just be left to us. Yeah their kids and kids after that they'll help bring it back. Linking back, they might not, it's all unpredictable. They think they can predict what can come yet you really can't."* (Jake, lines 305-308)

Here, there seemed a complex interplay between hope and insecurity; initially Jake felt hopeful future generations would help the environment, however halfway through he seemed to experience a realisation about the uncertainty of the future. His hope then feels more fragile as it is shrouded by insecurity.

Aaron's sense of optimism felt more fleeting, with hope being eclipsed by concern that not enough is being done:

> "*I went with Jet2 and they do quite a lot which is very very very very very good but you don't really see a lot of other planes companies doing that which is not a very good sign. Yeah I mean cars yeah a lot of people are doing stuff about that like people trying to make electric cars and stuff like that. (Inaudible) I mean don't get me wrong, they're good but they're way too expensive, that's why people are buying diesel and petrol still*." (Aaron, lines 262-268)

Aaron seemed to feel hopeful people are finding ways to reduce climate change (e.g., making electric cars), however, this feeling of optimism was only experienced momentarily, dampened by awareness that efforts do not go far enough. For Aaron, current efforts merely scratch the surface.

Redbull-Bob seemed to experience a sense of hope when thinking about the unification of global leaders:

> "*It's all the world leaders coming together as one and trying to sort out the world and make it a better place*". (Redbull-Bob, lines 5-6)

Perhaps seeing world leaders together provided him with a sense of hopeful assuredness and confidence that climate change is being taken seriously. There was a sense this optimism, however, felt modest and perhaps restrained:

> "*It feels just normal because they do do meetings but at the same time it's a bit err really good because they, they can sort out the climate a bit more as well*." (Redbull-Bob, lines 28-30)

Here, he described seeing world leaders coming together as 'normal' but 'really good' at the same time, conveying a cautious sense of hope, almost as though he was reluctant to be too optimistic to protect himself from future disappointment.

3.8 GET F. A sense of threat: climate change taps into other forms of destruction

(Jake, Aaron Nicholas and Redbull-Bob)

This GET relates to participants experiencing a sense of threat beyond the climate crisis. Interestingly, each participant referenced war, nuclear bombs, or nuclear reactors in their accounts. I interpreted this to mean that, for them, climate change taps into a nerve of other forms of destruction, evoking a sense of threat. An important feature within this GET is that participants appeared to experience a sense of impending danger and fear of the future concerning other forms of destruction. However, this theme is broader, with participants also experiencing confusion, anguish and anticipated loss.

Jake frequently raised the topic of war throughout. He made links between war and climate change, describing the impact conflict has on landscapes:

> "*Say…say with the wars, it's de-homing people, it's causing people to leave their homes but it's also destroying such large amounts of land. It's just causing mass destruction."* (Jake, lines 70-72)

Here he used the words 'mass destruction' to convey the extent of the damage.

Jake sounded impassioned and incensed as he described current wars as 'completely

unreasonable':

> "*I'm feeling confused about why they're doing it, like, if you want land you should find a way to make an alliance and join together and not just come in guns n'all, dance ready, bombing places and that. 'Cause it's completely unreasonable and it's not doing anybody good at all*." (Jake, lines 191-194)

For Jake, this sense of threat seemed linked to insecurity about the future as he described the possibility of the end of life on Earth:

> "'*Cause it could end all life if it gets to a certain point. Like knowledge of what people have invented – the mass destruction weapons that could go off like…they're unpredictable*." (Jake, lines 184-186)

Like a looming shadow, the knowledge of the existence of weapons of mass destruction feels intimidating to Jake. Jake seems to use such weapons to illustrate the devastating potential of problems humanity has created. Drawing attention to how they could 'go off' seemingly anytime illuminates the pervading, omnipresent nature of this threat.

The sense of threat experienced by Aaron and Redbull-Bob also seemed inextricably connected to insecurity about the future:

> "*...if the world leaders do sort it (climate change), it might turn into a even like worser war should I say than it already is. Because err if they're trying to make it more better and then they make eco weapons that are more deadly and silent then it could cause a world war".* (Redbull-Bob, lines 17-21)

For Redbull-Bob, any flicker of optimism was quickly extinguished, as he described how 'eco weapons' may be developed if world leaders solve climate change. He appeared to feel that finding a solution to a problem may only give rise to further threats. He seemed suspicious and fearful of the future, hesitant to be optimistic.

Aaron Nicholas described the 'devastating' impact of nuclear weapons and how entire cities 'could be destroyed', indicating the irreparable enormity of the possible damage.

> "*So with nuclear waste that's pretty bad. I mean most of it's steam but like I said earlier nuclear bombs when things go wrong it could be devastating. It means that basically that erm cities and stuff like that could be destroyed*." (Aaron, lines 298-301)

Jake similarly conveyed a sense of panic and anguish about the possibility of irreversible damage:

> "*I think Russia at one point threatened saying that we have a bomb that could wipe out the UK. If that happened, then that would be such a huge responsibility. It would end up in such a massive war. It might end up doing permanent damage".* (Jake, lines 278-281)

For each participant, a foreboding shadow appears to have been cast, warning of impending

danger ahead.

3.9 GET G. A sense of the other as an adversary – 'They should be doing a lot more'

This GET broadly encompasses a sense of 'them versus us', with 'them' being the problem. There was a feeling of separation between the 'self' and 'other' in the CYP's accounts, each conveying a sense of an adversary 'other'. This is reflected in the use of pronouns throughout the theme with 'I' or 'we' generally being used in a virtuous sense and 'they' referring to antagonists (i.e., those responsible for climate change). This theme includes CYP's experiences of dismay at the actions of others (or lack thereof), a feeling of others not listening and a sense of powerlessness to effect change as power resides with the 'other'. This GET was split into five subthemes: 'Disappointment, frustration and incredulity', 'A sense of suspicion and distrust', 'A sense of injustice', 'A feeling of powerlessness' and 'Alone in the fight'. They relate to each other because of the overall sense of the 'other' being the problem.

3.9.1 Disappointment, frustration, and incredulity

(*Jake, Aaron Nicholas, Redbull-Bob*)

The participants seemed to feel varying levels of frustration and disappointment towards others. Whilst Aaron appeared to view the 'other' as malevolent, knowingly making decisions harmful to the planet, Redbull-Bob seemed to view the 'other' as ignorant (i.e., lacking awareness about the planet).

Aaron expressed a sense of disappointment with his peers for insufficient efforts to prevent climate change:

> "*It's kinda worrying because we're supposed to be the generation that goes into the future and helps people be better and we're not doing it*." (Aaron, lines 78-80)

Whilst Aaron described feeling worried here, his tone seemed closer to frustration. Describing his generation as supposedly caring suggests he feels this portrayal is inaccurate and dishonest. There is a tinge of bitter disillusionment here, indicating a hint of shame at belonging to such a group.

Aaron also seemed to experience a sense of dismay, directed towards the older generation:

> "*…I don't see how the younger generation is gonna help when the adults aren't doing*

> *anything, and adults are supposed to be (an) example to children which they aren't doing*." (Aaron, lines 426-428)

By describing what adults are 'supposed' to be doing, Aaron indicates he sees them as falling short of his expectations. Emphasising his point, he repeats that adults 'aren't doing anything', implying a sense of growing resentment towards 'adults'.

Throughout, there was a strong sense of Aaron's frustration and exasperation towards others:

> "*It's....anger really. That's the only thing I really think about. It's just it's anger and annoyance why they've they've got to have been taught not to do stuff like that when they know what the consequences will be. I mean there'll probably always be people like that. But it's..people are putting bins everywhere that promote chucking stuff in the bin but there's still people just deciding to chuck it on the floor and just not thinking about what the consequences could be into the future*." (Aaron Nicholas, lines 146-152)

There is a clear sense Aaron feels enraged as he shares that anger is 'the only thing I really think about'. He sees others as being aware of the consequences, yet consciously choosing to ignore them and act in ways harmful to the planet. Whilst he acknowledges some people engage in helpful action by putting out bins, this is fleeting and overshadowed by a strong sense of frustration.

Aaron seemed further exasperated when he asked:

> "*It's just like why (do) people want to destroy it? I mean some people don't even think about what their actions could be if they do something that's bad for the environment."* (Aaron, lines 378-381)

Here he did not ask out of curiosity, but rather to emphasise the absurdity of people's actions. Aaron felt aggrieved by the actions of others and seemed to experience a sense of incredulity.

Redbull-Bob also seemed incredulous when he explained that other people are not as aware of the impacts of climate change as him:

> "*I have been asking people what they think, they're like 'what is it'. They don't even know*." (Redbull-Bob, lines 176-177)

His emphasis on 'even know' conveyed a sense of despairing disbelief in others' lack of awareness.

While Aaron and Redbull-Bob seemed disillusioned with humanity overall, Jake's frustration was more focused, directed towards leaders. Jake explained he disagrees with decisions

relating to urbanisation and expressed disappointment about the impact road construction has on nature:

> "*Like motorways, you often see them about in three lanes wide, one maybe bigger. And it's just such large things like just dug it up filled it with concrete and if they'd of, they could have kept an eye on whether it's affecting the road's nature, without having to place down all this concrete. Yeah, I get it, it's for stabilisation..."* (Jake, lines 46-50)

The indignant tone used when Jake said, "Yeah, I get it" seemed to point towards a feeling of bitterness and brewing resentfulness about decisions being made.

3.9.2 A sense of suspicion and distrust

(Aaron Nicholas and Redbull-Bob)

Aaron and Redbull-Bob expressed distrust towards the 'other', specifically the government or those in positions of influence.

Aaron seemed to experience a sense of doubt and loss of trust due to misleading information:

> "*I think people have been misguided, like really misguided. It's like I read up online there was this thing that people are claiming money because of emissions and stuff like that from diesel cars and people who make the cars are basically lying about the emissions and the emissions are a lot worse than they were wrote down to be. So people are buying the cars when they're being misguided…"* (Aaron, lines 251-256)

Here he described how people are being deceived by others and consequently are unknowingly making decisions that negatively impact the planet. Aaron thinks people are being 'misguided' and lied to, implying he does not know what to believe or who to trust.

This sense of doubt and distrust intensified later in the interview, as Aaron questioned 'what's the truth':

> "*What's…what's the truth? It's like people are being misguided. Like people in the government are just misguiding the population*." (Aaron, lines 448-449)

Here his frustration was directed towards 'the government', whom he sees as deceitful. He felt duped and seemed to experience a sense of betrayal.

Redbull-Bob similarly seemed to experience a sense of scepticism and distrust in the government:

> "*It's like they say they're going to do something better but they never do it."* (Redbull-Bob, lines 219-220)

The use of the word 'never' as an absolute term emphasises how he feels they do not follow

through on what they say they will do, and these broken promises have perhaps led to a breakdown in trust.

3.9.3 A sense of injustice

(*Jake, Aaron Nicholas, Redbull-Bob*)

Each participant seemed to experience a sense of injustice inflicted by the 'other'.

Aaron appeared to experience a sense of injustice when he described that climate change is not spoken about as frequently as other issues such as war:

> "*It's not really widely spoken as. I mean its spoken about wars and stuff like that, I understand that, but they should be doing a lot more for the climate change*." (Aaron, lines 28-31)

Whilst Aaron is understanding and sympathetic towards other matters receiving attention, he feels this is unjust and climate change should be prioritised.

For Redbull-Bob, his sense of injustice relates to the continuation of car production despite awareness this is harmful to the planet:

> "*It's just really conflicting cause if we're trying to help the environment, don't create electric cars just shut down the factories for making the cars cause there's plenty...*" (Redbull-Bob, lines 70-73)

Asserting what needs to be done, Redbull-Bob seems self-assured and resolute in his reasoning. He takes a less nuanced perspective, and his sense of injustice is perhaps more rigid than Aaron's.

Jake similarly appeared to experience a strong sense of injustice, seemingly relating to the feeling the climate is unduly neglected as those in power are motivated by self-serving interests:

> "*…They more care about finding places to live and natural resources, like, erm crude oil, rubber and all that."* (Jake, lines 61-63)

> "*it's just a way of saying well 'if we do this we don't care' um 'we're just we're protecting ourselves' that's all they want. Either they're doing it for self-protection or it's for greed*." (Jake, lines 272-275)

Jake sounded irritated here and his emphasis on the word 'greed' conveyed a palpable sense of contempt. He appeared to have a cynical view of those he was describing; he felt they do not genuinely care about the climate.

3.9.4 A feeling of powerlessness

(Jake, Aaron Nicholas, Redbull-Bob)

This subtheme relates to the wider GET, 'A sense of the other as an adversary' as participants seemed to view power as residing with the 'other', or that they did not have the power to challenge the 'other'.

Redbull-Bob seemed to view the power as residing within 'the government' as they 'rule the country':

> "*It's the government they rule the country we can't do owt about that until May this year*." (Redbull-Bob, lines 214-215)

Conveying a firm sense of disempowerment to effect change, he felt there was nothing he could do at present. However, referencing the local elections suggested he saw a flicker of possibility to induce change.

Aaron also seemed to see the power as residing with 'the government':

> "…*Those are made by like people in the government who are supposed to be leaders. If the leaders aren't taking any notice of...of erm the cautions given out by scientists and geographers, then I think what will? It's like I don't think a lot of governments will take any notice until it's worse case scenario*." (Aaron, lines 185-189)

Here Aaron described how decisions are made by governments, but he does not think they will implement reform until the situation is dire. He sounded almost resigned when rhetorically asking, 'What will [make them take notice]?' This suggests a sense of futility and powerlessness concerning government inaction.

Aaron also seemed to experience a sense of powerlessness to shift other's perspectives:

> "*You have a parent who does things that're wrong for the environment or bad for the environment then you get a child a few years later into an adult to still do it the thing that's wrong and it passes on and passes on and passes on. Until they'll be someone who points out 'no this is wrong, don't do it' but by then it'll be too late*." (Aaron, lines 434-438).

Describing cycles of poor decision-making across generations seemed to reinforce his sense of disempowerment; Aaron seemingly did not see a way for this cycle to be interrupted or broken until it is 'too late'. His wording here highlighted a tangible sense of hopelessness.

Jake's sense of powerlessness had a different quality, relating to feeling the future is outside his control:

> "*We can't control what the future generations do, it's what...they do what they want to do like*." (Jake, lines 218-219)

Here he seemed to feel disempowered, believing his ability to shape the behaviour of future generations is limited. There was also a sense he felt doubtful or distrustful of humanity to enact change indicating an insecurity about the future alongside powerlessness.

3.9.5 Alone in the Fight

(Aaron Nicholas, Redbull-Bob)

I interpreted this subtheme to relate to the wider GET, a sense of the 'other' as an adversary, as Aaron and Redbull-Bob seemed to separate themselves from others in their accounts, pointing towards a feeling of isolation.

Aaron conveyed a sense of aloneness when he shared how he feels no one is listening:

> "*The government isn't listening. People in general aren't listening."* (Aaron, lines 412-413)

Reflective Box: *Aaron's comments made me feel guilty and a sense of responsibility; I am a part of the adult world that has caused the current situation.*

Aaron described how it is not only the government not listening, but 'people in general'. This implies a sense of distance from others, as though Aaron feels he is a lone voice and not being heard.

Redbull-Bob seemed to echo this sentiment when conveying a sense of despair that the government is not listening:

> "*The government isn't actually paying attention at what's happening and it makes me feel upset."* (Redbull-Bob, lines 204-205)

He uses the word 'actually' to stress that the government are disregarding his plight, leaving him potentially feeling dismissed and unheard.

Redbull-Bob's sense of aloneness also had a distinct quality when he described how others do not realise that manufacturing cars, including electric cars, may increase climate change:

> "*At the moment they're trying to make more cars and electric cars, but they don't realise that if there's more cars then there's more factories working and then them factories are burning more fossil fuels increasing the err warmth of the climate."*

(Redbull-Bob, lines 48-51)

By saying ‘but they don’t realise’, he conveys a sense of knowing more or being more aware than others. This separation of himself from other people points towards a feeling of isolation.

3.10 Conclusion

In this chapter, I have presented the seven GETs identified following the cross-case analysis and, in doing so, I have addressed the primary research question: *How are children and young people engaged in climate change action experiencing climate change?* (Dennan, 2023). This was an interpretive process, aiming to build a coherent representation of how CYP, within a Western cultural context, are experiencing climate change. I explored aspects of shared experiences; however, I acknowledged there was not complete coherence across accounts. This was reflected in several GETs and subthemes applying to certain participants.

CYP experienced a deep connection to the natural world; they seemed in awe of Earth and saw it as precious and something to cherish. Closely related to CYP’s connection to the planet, CYP seemed to experience a sense of loss and grief concerning environmental destruction, both present and anticipated. CYP also seemed to experience a sense of guilt, betrayal and remorse concerning humans’ impact on the planet. For the CYP danger feels perilously close alluding to a sense of standing on the precipice and a fear of what the future holds. The existential threat of climate change also appeared to tap into a nerve of other forms of destruction. This alluded to a broader sense of threat the CYP seemed to be experiencing beyond the climate crisis. Despite this sense of threat, each participant appeared to experience a flicker of hope that things could get better and a sense of possibility that positive change is within our grasp. The CYP also seemed to separate themselves from others, perceiving the ‘other’ as an adversary, responsible for climate change.

In the subsequent discussion chapter, I relate these findings to research and theory and consider what EPs can learn from these insights.

Chapter 4: Discussion

4.1 Overview

In this chapter, I relate the findings of this research to existing literature and psychological theory. To do so, I take each GET identified during the cross-case analysis and address the primary research question: '*How are CYP engaged in climate change action experiencing climate change?'* (Dennan, 2023). I then explore the implications for educational psychology and, in doing so, I respond to the second research question: *What can EPs learn from these insights/experiences?* (Dennan, 2023).

In alignment with my philosophical positioning and research methodology, I embrace the ideographic tradition of IPA and do not make generalisable claims. However, continuing the process of theoretical transferability I subsequently explore implications for practice. In doing so I address the secondary research question: '*What can Educational Psychologists learn from these insights/experiences?'* (Dennan, 2023).

4.2 GET A. A sense of preciousness and being in awe of Earth – 'It's a sign of how beautiful our world is'

This theme encompasses appreciating and cherishing the natural world which feels precious and fragile. Within this theme, there was a clear sense of the CYP's connectedness to the planet and nature. This lends support to Hickman's (2020) case study reflections in which children's concerns about climate change were interconnected to their attachment to the planet.

In this study, CYP experienced a sense of admiration and wonder towards Earth; the planet was described as 'beautiful' and there was a feeling that others do not appreciate the world's beauty in the same way. Spaces lacking human interference were particularly cherished, as one participant described enjoyment in seeing nature 'flourish' and less polluted places as 'like paradise'. The desire for nature to be left undisturbed indicated a sense of respect for nature. This relates to previous research in which CYP held a profound respect for the

natural environment (Trott, 2022) and highly valued Earth's 'natural beauty' (Arnot et al., 2024).

Animals represented the significance and preciousness of nature for two participants and reflecting on what could happen to animals seemed to be their way of making sense of the impacts of climate change. The impact of climate change on animals is a primary concern for CYP (Payton, 2023; Trott, 2022) and they seem to have a strong sense of the rights of animals and have empathy towards them (Hickman, 2020; Léger-Goodes et al., 2023). This could relate to their perceived innocence, vulnerability and powerlessness (i.e., they are at the mercy of human decisions). For one participant, their sense of appreciation and awe at Earth's beauty seemed connected to their perception the planet is something we need to nurture and care for, lending support to previous research in which CYP viewed humans as having a role in being custodians for the planet (Trott, 2022). This suggests that environmental concern can be viewed through a lens of CYP's connectedness to other people, animals, and the planet, reinforcing Hickman's (2020) notion of reframing 'eco-anxiety' to 'eco-empathy'.

The fragility of nature and the precariousness of the situation also seemed to contribute to the unique value and specialness the CYP saw Earth as holding. This parallels Freud's (1916) assertion that the very transience of an experience enhances its beauty and value. Participants made reference to nature's life-sustaining functions as well as the impermanence of the planet, nature and its creatures. One participant used a metaphor comparing the Amazon to lungs to emphasise how vital he sees nature as being for human existence. This reflects previous research which suggests CYP's appreciation of nature goes beyond surface-level beauty, and there is a recognition of nature's essential life-supporting functions (Trott, 2022).

Overall, the CYP interviewed appeared to have a strong sense of connection to the natural world. Whilst enjoyable experiences in nature are associated with increased psychological well-being and higher levels of climate engagement (e.g., Ojala, 2023b; Sandifer, Sutton-Grier & Ward, 2015), so too is a strong sense of nature connectedness (e.g., Capaldi, Dopko & Zelenski, 2014; Mayer & Frantz, 2004; Nisbet, Zelenski & Murphy, 2011). Nature connectedness can be defined as a psychological construct referring to individuals' experiential sense of connection to nature (Mayer & Frantz, 2004). From an evolutionary perspective, a sense of connectedness and attachment to nature is advantageous, as being highly attuned to nature would have been essential to survive and thrive. This is argued to have led humans to have an unconscious affiliation to nature in what is termed 'the biophilia

hypothesis' (Kellert & Wilson, 1993).

However, industrialisation, increasing urbanisation and the prevailing anthropocentric Western thought have arguably led to an increasing sense of disconnection from nature, with humans viewing their sense of 'self' in isolation, separate from the planet (Lumber, Richardson & Sheffield, 2017). Whilst CYP in this study seemed to have high levels of connectedness to nature, in the UK individuals are reported to generally experience low levels of nature connectedness (Richardson et al., 2022). Consequently, re-establishing humans' connection with nature may be important for increasing psychological well-being and pro-environmental behaviours, and expanding individuals' concept of self to include the natural world could be central to this (Lumber et al., 2017; Mayer & Frantz, 2004). Supporting the claim that nature connectedness supports well-being, Gunasiri et al. (2022) found that increased contact with nature helped CYP to cope with difficult feelings they had related to climate change.

Interestingly, the concept of nature dis/connectedness could be argued to relate to Marxist ideology and the metabolic rift theory (Foster, 1999). From a Marxian perspective, the exchange of energy and resources between humans and nature is critical for maintaining balance and the earth's life-sustaining functions (Foster, 1999; 2015; 2016). However, capitalist systems which prioritise profit, growth and acquisition of power over environmental sustainability, have given rise to a 'metabolic rift' as there is a disruption in the ecological exchange between humans and nature (Foster, 2015; 2016; Moore, 2011). This has alienated humans from the environment, as nature is seen as a commodity to be exploited rather than something we are connected to and part of (Foster, 2015). This further highlights the importance of re-establishing humans' connection with nature and asserts the need for sustainable and equitable human development.

4.3 GET B. A sense of loss and grief – 'We're destroying what we're living on'

This theme encompasses CYP's grief for current and anticipated ecological losses. This theme seems closely related to the phenomenon termed 'ecological grief', discussed previously.

When describing environmental destruction, there was a sense of loss and permanence in participants' descriptions; something once there is gone and cannot be replaced. This bolsters previous research whereby some CYP appeared to experience a sense of grief concerning observed losses (e.g., Karsgaard & Davidson, 2021; Léger-Goodes et al., 2023; Rushton et al., 2023). For the CYP I interviewed, their experience of grief broadly related to the loss of nature and animals, in alignment with prior research (Karsgaard & Davidson, 2021; Léger-Goodes et al., 2023; Rushton et al., 2023), and this is thought to relate to how CYP understand the impacts of climate change (Rushton et al., 2023). Unlike previous research, however (e.g., Karsgaard & Davidson, 2021; Léger-Goodes et al., 2023), the CYP in this study did not seem to relate feelings of loss or grief towards those considered vulnerable or more susceptible to the direct impacts of climate change.

Alongside a sense of loss, the CYP also appeared to experience a sense of anticipation as further climate-related losses felt inevitable. This reflects previous research suggesting CYP experience anticipatory ecological grief as they consider the impending loss of ecosystems and animal species (Jones, 2023; Karsgaard & Davidson, 2021; Strife, 2012; Thompson et al., 2022). For instance, in a previous study, one CYP lamented, "I feel sad because the animals are going to die." (Strife, 2012, p.43).

As Parkes and Prigerson (2010) say of the pain of grief, "It is, perhaps, the price we pay for love, the cost of commitment" (p.6). Thus, grief over current or anticipated losses is arguably a rational and natural response, reflective of our connection to the natural world (Cunsulo & Ellis, 2018; Cunsulo et al., 2020). While grief concerning the loss of loved ones is well documented, there is little research on how this may relate to environmental loss (Cunsulo & Ellis, 2018). This means it is often absent from climate change discourse and, subsequently, the loss and pain experienced can go unacknowledged (Cunsulo & Ellis, 2018; Ojala et al., 2021). This feels pertinent given that over time, as the impacts of climate change worsen, it seems likely loss and grief, as well as anticipatory grief, may be experienced more widely (Cunsulo & Ellis, 2018). Furthermore, themes of grief and loss are already prevalent in societies directly impacted by climate change (Cunsolo et al., 2012; Ellis & Albrecht, 2017).

Freud's (1917) theory of mourning and melancholia, based on human loss, laid the foundation for subsequent theories of grief. Freud argued that mourning and melancholia are related, yet distinct, responses to loss; whilst mourning is a natural and healthy response to loss whereby grief is processed, melancholia is instead argued to be a pathological response, arising when there are difficulties comprehending or perceiving what has been

lost, leading to unresolved grief (Freud, 1917). Given the sheer scale of the climate crisis, it is perhaps unsurprising that the grief or anticipated grief experienced by CYP may be complex and unresolved, encompassing feelings of hopelessness and despair. Further, perhaps it is not too much of a stretch to suggest that for some, the grief experienced may be paralysing and they may respond to this by avoiding reality as they feel immobilised by the scale of the threat.

Whilst Freud's theory of mourning and melancholia was based on human loss, there have been some attempts to relate climate grief to popular theories of the grief process (e.g., Randall, 2009; Running, 2007). For instance, Running (2007) relates climate grief to Kübler-Ross' framework of five stages of grief (Denial, Anger, Bargaining, Depression and Acceptance). However, there are key limitations to some of these conceptualisations, as they assume the grieving process occurs in stages, and there are arguably aspects of climate grief not so well captured within such models (Pihkala, 2022). Whilst there have been limited attempts to relate ecological grief to broader grief literature (Pihkala, 2022), Worden's (2015) 'Tasks of Grief' provides useful insights concerning climate grief, as grief is conceptualised as a set of tasks seen as being in process and never complete: accepting the reality of the loss, processing the pain of the loss, adjusting to a new environment, and reinvesting emotional energy. The sense of loss CYP experienced could relate to Worden's (2015) model as it accepts something has been lost, the world is forever changed, and we need to learn to adjust to a new environment. This theory also offers hope, as Worden (2009) argues that action "can be a powerful antidote to the feelings of helplessness that most mourners experience" (p.38).

Currently, grief theories are limited in their extension to non-humans. This could be argued to be reflective of an anthropocentric view of mourning, resulting in other forms of loss being minimised. Grief, however, can be a powerful narrative and has the potential to be an ethical and political force that can mobilise action (Willox, 2012). Therefore, reconceptualising nature as something that can be mourned, highlights our inextricable connection to nature and may promote an individual and collective sense of responsibility and response to the climate crisis (Willox, 2012). As feelings of grief and loss arise out of love and care, as painful as they are, they could be seen as necessary for us to realise the scale of the threat and drive us to act (Cunsulo et al., 2020; Cunsulo & Ellis, 2018; Pihkala, 2022). Perhaps, then, instead of merely aiming to alleviate CYP's feelings of loss, we should consider "how can we embrace the pain to learn from it, express our grief and then transcend?" (Cunsulo & Landman, 2017, p.xx).

4.4 GET C. A sense of guilt, betrayal and remorse – 'The planet is a gift but we're the burden'

This theme encapsulates CYP's feelings of guilt that humanity has betrayed the planet and the sense of bearing the weight of this responsibility. Previous research has similarly found some CYP experience feelings of guilt concerning insufficiently addressing climate change (Thompson et al., 2022), guilt about being able to enjoy a high quality of life due to being less affected by the direct impacts of climate change (Hickman, 2020; Thompson et al., 2022) and guilt for the desire to live unsustainable life (Payton, 2023).

Much of the discourse within this theme centred around it being the actions of our species that are harming the planet, alluding to a sense of species guilt. Seeing themselves as part of the problem, participants frequently used the word 'we' here (e.g., "but we're the burden"), indicating a sense of collective guilt. Other research has demonstrated similar language-use by CYP, such as "in some way [I'm] ashamed to be human, looking at what *we're* doing to our planet" (Parry, et al., 2022, p.33) and "our world's changing because of, just because of *us* really" (Payton, 2023 p.110). This suggests CYP may experience a sense of shame at belonging to a species which has betrayed the planet. In this research, Aaron clearly alluded to this by emphasising the irony of humanity's 'supposed' superiority. The CYP's guilt seemed existential in nature, as they saw their very existence as a burden on the planet. Such feelings of existential guilt could be argued to arise from our 'ecological unconscious' in response to an planetary crisis. Drawing on Jung's notion of the collective unconscious, Rosak (1992) founded the concept of the ecological unconscious which suggests that humans have an unconscious and deep-rooted connection with nature due to our intrinsic interdependence. Industrialisation and global development have arguably diminished our ability to connect with nature and thus Rosak (1992) advocates for the need to awaken the ecological unconscious within us, resulting in a greater connection to the natural world and an increased sense of responsibility towards the planet.

In addition to the sense of collective or existential guilt, Aaron also seemed to experience a sense of individualised guilt as he described becoming aware that his actions have contributed to climate change. He seemed to experience discomfort here, which I interpreted as cognitive dissonance (Festinger, 1957); humans seek consistency and order, thus discomfort can arise when there is a misalignment between beliefs, values and actions.

Karsgaard and Davidson (2021) similarly found CYP can experience a sense of guilt and shame about how they feel they have personally impacted the planet. Diffey et al. (2022) drew attention to the guilt CYP battle with about their carbon footprints, despite awareness that the systems they exist within (e.g., capitalism) make moral decision-making challenging.

The CYP's sense of guilt seemed closely connected to their care and respect for the planet. A powerful example was when Jake contrasted the gift the planet has given humanity (i.e., life) with the 'death and destruction' humanity has reciprocated. This mirrors Klein's theory of guilt, which argues guilt partially arises out of love, and this drives the desire for reparation (Klein, 2011). Guilt as a motivator for reparation lends strength to the claim that guilt associated with climate change has the potential to be valuable and pro-social, serving as a moral compass to guide and uphold standards of behaviour (Jaśkiewicz et al., 2023; Mallett, 2012; Teroni & Bruun, 2011).

4.5 GET D. A sense of standing on the precipice: fear and insecurity of 'what will become of our futures'

Within this GET there was a broad sense of a future hanging in the balance. The CYP seemed to be experiencing fear and insecurity towards the future, expressing concerns that the situation feels precarious, and danger feels perilously close. This lends support to prior research suggesting some CYP are experiencing uncertainty and fear towards the future concerning the threat of climate change (Léger-Goodes et al., 2023; Orlowski, 2020; Rushton et al., 2023; Thompson et al., 2022). Ojala (2016) argues a sense of uncertainty is central to climate change, as no one can predict precise timings and impacts.

There was a sense of the future feeling difficult for participants as they described increasing urbanisation and extreme weather events. In previous research, CYP have similarly expressed negative thoughts about what the future holds, conveying a sense of difficulty lying ahead (Payton, 2023; Thompson et al., 2022). In Payton's (2023) research, YP used the term 'suffer', alluding to a sense of impending pain.

The participants' fear of the future related to the serious consequences they saw climate change having on animals, nature and their own futures. Previous research has similarly found CYP express concern about the future of animal species (Littrell et al., 2020), Earth and their future selves (Herrick, Lawson & Matewos, 2022; Payton, 2023). For instance, in

Jones's (2023) research, participants expressed feelings of despair and hopelessness when considering their hypothetical futures. However, unlike previous research (Arnot et al., 2024; McDonald et al., 2022; Payton, 2023; Strife, 2012), the CYP in this study did not appear to relate their sense of fear about what may happen to future generations, or the world future generations will inherit.

Alluding to a sense of standing on the precipice, CYP's fear and insecurity towards the future seemed to be accompanied by a sense of urgency, as there was a feeling time is running out (i.e., we will soon reach a point of no return, whereby the effects will be irreversible). This reflects previous research in which CYP seemed to feel we are reaching a critical tipping point in the climate crisis (Arnot et al., 2024; Léger-Goodes et al., 2023; Payton, 2023; Rushton et al., 2023; Thompson et al., 2022). This was similarly accompanied by a sense of urgency; humanity needs to act imminently before it is too late (Herrick et al., 2022; Jones, 2023; Karsgaard & Davidson, 2021; Payton, 2023).

Participants seemed to experience a shadow of futurelessness, as they felt humanity is moving towards the possibility of an unalterable fate. They described apocalyptic scenarios and questioned the possibility of total extinction. Previous research similarly indicates some CYP are experiencing a sense of futurelessness, with apocalyptic predictions and concerns about 'the end of the world' featuring (Léger-Goodes et al., 2023; Rushton et al., 2023; Strife, 2012), alongside a broader sense of impending doom (Thompson et al., 2022). Whilst in some research CYP seemed to experience a stronger sense of existential bleakness as they expressed fear humanity has left it too late (Jones, 2023; Parry, McCarthy & Clark, 2020), here there was a sense humanity may still come back from this, and one participant described the possibility of two distinct futures on the horizon.

The views expressed by CYP appear consistent with climate change being seen as an existential threat (Jones, 2023; Karsgaard & Davidson, 2021; Payton, 2023; Strife, 2012; Thompson et al., 2022). This reflects how climate change is a threat to our lives and core understandings (Clayton, 2020). At a broad level, this relates to existentialist philosopher Tillich's (1952) three forms of existential anxiety: the anxiety of death, the anxiety of meaninglessness and emptiness and the anxiety of guilt and condemnation. The threat of climate change seems pertinent to each form, given it is a threat to our very existence, the vastness and complexity of climate change can make individual action feel meaningless, and it relates to morality given that, living in the Western world, we are complicit in the structures that perpetuate climate change (Ojala, 2016). Within this research, however, the former seems particularly pertinent (the anxiety of death) given the CYP seemed to

experience a sense of futurelessness and that we are marching towards an unalterable fate.

4.6 GET E. A flicker of hope, a sense of possibility that 'fate is in our hands'

This theme encompasses a fragile hope and a feeling of empowerment, that positive change is within humanity's grasp. The hope CYP experienced appeared to vary throughout the interviews and between participants. Despite this variation, none of the CYP seemed to be experiencing a complete or overwhelming sense of hopelessness or helpless despair. This aligns with previous research which indicates CYP tend to experience some degree of hope that humanity will overcome climate-related challenges we are facing and believe that a more optimistic future awaits (Léger-Goodes et al., 2023; Orlowski, 2020; Payton, 2023; Thompson et al., 2022).

The sense of hope experienced by the CYP often seemed delicate or fleeting. Their responses did not indicate naivety but reflected a sophisticated awareness of the gravity and seriousness of the situation. For instance, when a participant spoke about fate being in humanity's hands he acknowledged 'we could change it, or we could destroy it'. This is reflective of prior research which suggests CYP are not overly optimistic (Finnegan, 2023; Rushton et al., 2023; Thompson et al., 2022). For instance, research suggests negative emotions concerning climate change tend to be more numerous than positive ones (Rushton et al., 2023; Thompson et al., 2022) and those who feel hopeful humanity will get through the crisis acknowledge obstacles and suffering lay ahead (Orlowski, 2020; Thompson et al., 2020).

Participant's sense of possibility seemed closely connected to the actions of others. For instance, CYP seemed to experience a firmer sense of hope when describing the pro-environmental actions of others (e.g., seeing people care for their gardens, or watching world leaders discuss the climate together). In a similar vein, the fragility of their hope seemed connected to their scepticism about others' lack of action. This parallels Diffey et al.'s (2022) findings that challenging emotions increased when YP perceived a lack of action from others.

Hope is typically depicted as a means of channelling difficult feelings (e.g., guilt, anger) into action (e.g., Kleres & Wettergren, 2017; Wlodarczyk et al., 2017). Similarly, in this study,

CYP's hope seemed connected to their sense of empowerment. In this way, the CYP's sense of hope could be described as 'constructive' rather than denial-based. Previous research has similarly found CYP's hope to be related to their sense of self-empowerment and agency, indicating higher levels of constructive hope than denial-based hope about climate change (Payton, 2023; Ratinen & Uusiautti, 2020). Importantly, stronger constructive-based hope is thought to promote engagement and pro-environmental behaviour and help with coping (Ojala, 2012a, 2012b, 2023b). Interestingly, this relationship between action and hope is considered bidirectional (i.e., hope gives rise to action, *and* action gives rise to hope) (Karsgaard & Davidson, 2021; Ojala, 2023a). This seems particularly befitting as by participating in climate-action, the CYP in this study were arguably engaging in a constructive coping strategy. Considering the link between constructive-based hope and pro-environmental behaviour, it seems imperative that we find ways to promote constructive-based hope as a coping strategy.

Given the connection between hope, action and empowerment the CYP experienced in this research, Hope Theory (Snyder, 2000) could provide a helpful model of reflection. Snyder (2000, 2002) views hope as a force for action; hope is described as the vision of a positive future (goals), along with an awareness of the various ways to achieve the desired future (pathways) and belief in oneself to follow the pathways (agency). In this research, a sense of agency seemed to be supporting CYP to experience the possibility of a positive future. Interestingly, as climate change is a collective issue, arguably collective, rather than individualistic pathways need to be considered to support hope (Ojala, 2023a).

4.7 GET F. A sense of threat: climate change taps into other forms of destruction

This theme relates to how the CYP seemed to experience a sense of threat from various forms of destruction. A sense of impending danger and insecurity about the future were important features within this theme, as war and nuclear threats featured heavily in CYP's accounts. This suggests CYP may connect the threat of climate change with other existential global threats.

There is currently a dearth of research exploring the connections between how people are experiencing climate change and other forms of existential threats. Despite this, research suggests global issues impact CYP's feelings of insecurity about the future and their sense

of threat. For instance, for CYP growing up in the 1980s, fears of nuclear war were a primary concern, and they seemed to experience an increased sense of futurelessness (Hesse, 1986). More recently, Czech university students expressed high amounts of concern about the prospect of nuclear war at the outset of the Ukraine-Russian war (Riad et al., 2023).

CYP's experiences in this research are arguably consistent with the theory of Affect Generalisation, which proposes that one's emotional responses can transfer from one context to another influencing our thoughts and behaviours (Johnson & Tversky, 1983). This could mean that CYP's feelings about a threat (e.g., climate change) may generalise to other threats (e.g., war and nuclear threat). Supporting this, Sisco et al. (2023) found climate change concern increased during the COVID-19 pandemic, despite a reduction in attention to climate change. These findings contradict the Finite Pool of Worry hypothesis for which there is limited evidence, which postulates that people have fixed amounts of emotional resources for worry.

Furthermore, information about these threats is more readily available than before, as technological advances mean CYP are arguably more connected to the world than previous generations. Crandon et al. (2022) highlight the volume of information available online, the way algorithms work to increase exposure to similar content and the lack of regulation of how this information is framed, all of which may increase the salience of threat and contribute to feelings of futurelessness. Whilst Crandon et al. (2022) relate this to the threat of climate change, this notion could perhaps be extended to include other forms of destruction. Reflecting on how the life-worlds of CYP have considerably shifted, Pihkala (2020) argues we are now living in an age of media-shaped reality, which may impact how CYP experience threats on a macro level.

Today's CYP are growing up with multiple existential threats to humanity, including the omnipresent threat of climate change, nuclear warfare and economic and social inequality. The concept of a polycrisis could be helpful here in considering the interconnection of multiple crises which have a compounding impact. Saito's (2023) ecosocialist ideas draw attention to the interconnectedness of social and environmental issues. Saito (2023) claims that capitalism is the cause of the polycrisis, as infinite economic growth drains the planet's resources and perpetuates economic and social inequality, permitting the excessive accumulation of wealth for the few at the expense of the many. Saito (2023) asserts that capitalism is therefore unsustainable, and that radical transformative change is needed. He argues for 'degrowth communism' which would include reducing consumption and

production as well as economic restructuring as a means for establishing a sustainable, egalitarian society.

4.8 GET G. A sense of the other as an adversary – 'They should be doing a lot more'

Within this theme, there was a broad sense of 'them versus us', with 'them' being considered problematic. This was reflected in the pronouns used, as 'I' or 'we' were predominantly used in a virtuous sense, whereas 'they' referred to antagonists (i.e., those responsible for climate change). This could be interpreted as a form of psychological distancing; possibly distancing oneself from others to preserve one's positive sense of self. Or this could be understood through the defence mechanism of splitting; viewing others as 'all bad' as a way of managing complex feelings (Fairbairn, 1994).

To understand this further, the social identity theory (Tajfel & Turner, 1985; Turner, Brown & Tajfel, 1979) may be a helpful theory to draw on. According to the social identity theory, people derive their self-concept through belonging to various social groups. Identifying with a certain group influences individuals' sense of who they are (i.e., their sense of belonging, purpose, self-esteem and identity), shaping their values, attitudes and actions. Individuals perceive the group to which they identify as being the 'in-group' and they tend to view this group more favourably as it enhances their self-concept. This in-group bias can be seen here as the CYP perceived themselves as belonging to a group who care for the environment and this seemed to be a source of pride as they tended to use 'we' in a virtuous sense (e.g., "*The thing that we don't get about why people aren't taking any action…*"). Further, the social identity theory suggests that members of the 'out-group' are viewed less favourably. This could similarly be seen in this study as the CYP tended to use 'they' or 'them' in a negative sense to refer to those responsible for climate change (e.g., "*Will they just continue on without a care of what anybody else says? Will they let greed take over"*). The CYP appeared to 'other' the out-group, viewing them as fundamentally different and attributing blame to them. The CYP seemed to judge the 'other' more harshly, seemingly attributing their actions (or lack of action) to negative personality traits such as being uncaring, greedy and/or selfish (e.g., "*They know what the consequences will be",* '*They know it's bad for the environment and they're not doing anything about it", "they do what they want to do like").* This appeared to be an example of the fundamental attribution error, whereby individuals have a tendency to attribute the behaviour of others to within-person

factors instead of situational factors. Whilst strong in-group cohesion may be supportive for mobilising collective action, it could also lead to intergroup conflict, potentially impeding progress (Fielding & Hornsey, 2016).

A key characteristic of this theme was a sense of disappointment, frustration and incredulity regarding others' harmful actions and their lack of climate-mitigating action. This was directed towards those in leadership positions, deemed as having more power, as well as the public. This lends support to previous research where CYP experienced frustration at societal structures, political leaders and others in general for their insufficient responses (Karsgaard & Davidson, 2021; Léger-Goodes et al., 2023; Strife, 2012; Thompson et al., 2022; Trott, 2020). CYP in this research perceived others as malevolent, wittingly making harmful decisions, or ignorant, blissfully unaware of their detrimental actions on the planet. Previous research suggests CYP can find it challenging to reconcile the lack of care shown by others with their own connection to the planet (Arnot et al., 2022; Payton, 2023). One participant's dismay was directed not only toward adults, whom he believed should serve as role models but also toward the younger generation, whom he felt were failing to uphold their reputation for caring for the planet. This perception aligns with the discourse positioning CYP as climate rescuers, unduly burdening them with responsibility (Tannock & Tannock, 2021).

Connected to CYP's dismay at the lack of response from those in positions of power was a sense of suspicion and distrust. One participant spoke about being 'misguided', asking 'what's the truth?', alluding to a sense of not knowing who or what to trust. Another participant seemed sceptical of the government's promises. Prior research similarly suggests CYP distrust the government (Orlowski, 2020; Payton, 2023) and in Payton's (2023) research YP also directed mistrust towards the media regarding misinformation.

CYP seemed to experience a sense of injustice inflicted by the 'other', as it was perceived climate change is unduly neglected, with other issues taking precedence. Payton's (2023) findings mirrored this as YP appeared frustrated by climate change being seen as low priority. In the current study, CYP's sense of injustice was framed by their perception of those in positions of power being driven by self-interest. This relates to Diffey et al.'s (2022) research where YP described feeling frustrated with the injustices perpetuated by the powerful, especially those impacting the most vulnerable communities.

CYP seemed to experience a sense of powerlessness, as they saw themselves as lacking the power to affect change or felt the power resided with 'others'. CYP perceived the

decisions of others as being outside of their control and saw the government as holding power. Feelings of powerlessness have been reflected in the literature, with CYP's sense of powerlessness and lack of agency often connected to their age and lack of structural power (Arnot et al., 2022; Payton, 2023; Strife, 2012; Thompson et al., 2022).

In this study CYP separated themselves from others, alluding to a feeling of isolation or a sense of being alone in the fight. A feeling of others not listening, or not being heard featured here (e.g., "*The government isn't listening. People in general aren't listening"*.). This is perhaps unsurprising given the lengths that CYP have had to go to in order to have their voices heard (e.g., school strikes for climate action), as discussed in the literature review. It seems likely that feeling alone in the fight feeds into and further exacerbates a sense of disempowerment; what is one individual supposed to do in the face of such a threat?

Feeling unsafe to speak out, dismissed, silenced and unheard and feeling frustrated the government is not listening features heavily within the qualitative literature (Hickman, 2020; Jones, 2023; Léger-Goodes et al., 2023; Payton, 2023; Rushton et al., 2023). This is similarly reflected in the quantitative literature; for instance, Chiw & Ling (2019) found that 70% of CYP surveyed felt concerned others do not take their opinions on the matter seriously and Atherton (2020) reported that 59% of CYP surveyed felt their voices on climate change were not being heard. Research has also drawn attention to the tension CYP may experience around sharing their views with those holding opposing opinions, particularly older generations or those perceived as holding more power (Hickman, 2020; Payton, 2023).

This stresses the importance that CYP have regular opportunities to connect with like-minded eco-empathetic individuals to support them to feel less isolated and/or dismissed. Opportunities to socialise and form connections with others engaged in climate action support psychological well-being through meeting individuals' needs for connectedness and belonging by feeling part of a community (Budziszewska and Głód, 2021; Gallay et al., 2022; Ojala, 2017). The formation of relationships can counteract feelings of isolation and provide a sense of solidarity and trust which in turn facilitates feelings of hope, inspiring collective action (Galley et al., 2022; Karsgaard & Davidson, 2021; Nairn, 2019; Ojala, 2017). According to Budziszewska and Głód (2021) the seriousness of climate change and the intensity of the emotions associated with it may lead to the formation of deeper social connections.

4.10 What can EPs learn from these insights?

Within this section, I explore the implications for educational psychology and, in doing so, I respond to the second research question: *What can EPs learn from these insights/experiences?* (Dennan, 2023). I recognise my sample was small, and, in alignment with my phenomenological positioning and IPA methodology, I am unable to make generalisable claims about the nature of CYP's experiences. Despite this, it is hoped there is some theoretical transferability; EPs may be able to make connections between the insights gleaned from these CYP's experiences and others. Developing EP's understanding of how some CYP are experiencing climate change, may subsequently change the way EPs think, talk and act concerning the climate crisis.

The CYP in this study seemed to be experiencing a range of complex and difficult feelings concerning the climate. Whilst this study only had three participants, the findings are reflective of the quantitative literate, which suggests that CYP are increasingly experiencing a significant amount of concern about climate change and that they are feeling worried about the impact it will have on their lives and their futures (Atherton, 2020; Boyes et al, 2014; Children's Commissioner, 2021; Friends of the Earth, 2020; Hickman et al., 2021; UNICEF UK, 2013). It is therefore crucial EPs are aware of the complex nature of CYP's experiences relating to climate change and that intense and difficult feelings can be experienced by those less affected by the direct impacts. These include the pain of ecological loss or anticipated ecological grief and feelings of guilt and betrayal of the planet, which may co-exist alongside more empowering, hopeful feelings, even if that hope is fragile.

EPs need to be aware there is currently little research exploring how theories and research concerning grief relate to environmental losses. As discussed, current theories of grief arguably reflect an anthropocentric view of mourning, which can minimise ecological losses and mean that the pain CYP experience may go unacknowledged. It feels important that EPs disseminate this understanding (e.g., through training) to educational practitioners so that environmental grief is seen as a genuine and valid response to climate change. This may then support them to accept, empathise with and validate CYPs' experiences of environmental loss. This feels particularly relevant as the planetary health further deteriorates. Drawing on Freud's (1917) mourning and melancholia, EPs should foster awareness and an understanding of different ways of responding to ecological loss. Given the difficulty comprehending the sheer scale of the climate crisis, it does not seem too much of a leap to suggest that this could lead to unresolved grief that is difficult to process.

Additionally, I tentatively suggest Warden's (2015) 'Tasks of Grief' model may be a helpful tool for reflection when considering how CYP are experiencing ecological grief, given that grief is conceptualised as a set of tasks seen as being in process and never complete, including learning to adjust to a new environment. Exploring this model with CYP may be particularly supportive in fostering a sense of hope and empowerment as it proposes that feelings of helplessness can be mitigated through action (i.e., reinvesting emotional energy). In this sense, we could see grief as necessary for humanity to realise the scale of the threat and drive us to act.

The CYP in this study seemed to perceive climate change as an existential threat and experienced a sense of insecurity about the future. The threat of climate change can give rise to ontological insecurity and raise questions of meaning and meaninglessness (Pihkala, 2020). The CYP's experiences could be argued to relate to Tillich's (1952) 'existential anxiety' which refers to the anxiety of death, the anxiety of meaninglessness and emptiness and the anxiety of guilt and condemnation. Given that climate change is a threat to our very existence and the complexity of climate change can make individual action feel meaningless, this has implications for the coping strategies used to manage such feelings of uncertainty.

Emotion-focused coping strategies aim to alleviate negative feelings related to the problem, and problem-focused coping strategies aim to find solutions to the problem (Lazurus & Folkman, 1984). However, problem-focused strategies are arguably less effective for global issues as they can increase difficult feelings and stress as we have less control over our actions (Hallis & Slone, 1999; Heyman et al., 2010; Ojala, 2012b, 2012c). Further, in the context of climate change, emotion-focused strategies could include denial or minimising the threat of climate change leading to reduced pro-environmental engagement and action (Ojala, 2012b, 2012c). Meaning-focused coping, however, potentially offers an antidote to these issues. Through meaning-focused coping, the scale of the threat is acknowledged, however, individuals find meaning by drawing on their values, beliefs and guiding principles to support well-being (Folkman, 2008). Research suggests CYP who employ meaning-focused coping strategies are more likely to engage in pro-environmental behaviour and experience more positive emotions (Ojala, 2012b, 2012c). Coping strategies which foster a sense of purpose seem particularly relevant to this study given the existential anxiety and meaninglessness the CYP were perhaps experiencing. As a result, perhaps EPs have a role in supporting CYP to tolerate and manage the uncertainty of climate change by supporting others to reflect on different coping strategies, with an emphasis on meaning-focused coping strategies.

Closely related to the concept of meaning-focused coping is constructive-based hope (i.e., hope based on realistic actions rather than false hope or denial) which is thought to similarly promote engagement and pro-environmental behaviour and help with coping (Ojala, 2012a, 2012b, 2023b). Given the connection between hope, action and empowerment in this research and in the wider literature, I suggest that EPs consider how constructive-based hope could be nurtured as a supportive coping strategy during the climate crisis. Given the different levels EPs work at (i.e., from the individual child level to systemic work), this work could be explored at the individual child level within individual therapeutic sessions with CYP all the way through to developing guidance at the LA or national level.

Today's CYP are growing up with multiple existential threats to humanity as social and environmental issues interconnect to create what could be termed a 'polycrisis'. Further, technological advances mean that information about these threats is more readily available than ever before (Crandon et al., 2022). Therefore, it is perhaps unsurprising that CYP in this study connected the threat of climate change with other existential global threats.
EPs should be aware of the theory of Affect Generalisation which suggests one's feelings about a threat may generalise to other threats (Johnson & Tversky, 1983). EPs should consider how to disseminate this understanding to other educational practitioners to support them in understanding how CYP may be experiencing the climate crisis.

The CYP in this study often saw 'others' as adversaries rather than collaborators and there was a broad sense of 'them versus us', with 'them' being considered problematic. This was reflected in the pronouns used, as 'I' or 'we' were predominantly used in a virtuous sense, whereas 'they' referred to antagonists (i.e., those responsible for climate change). Drawing on the social identity theory to understand this further, I suggest that the CYP may have been experiencing in-group bias and 'othering' members of the out-group. This has potential negative repercussions as it could lead to intergroup conflict which could impede progress towards collective action (e.g., through a lack of unified response or resistance to suggested action) (Fielding & Hornsey, 2016). To address this, Fielding and Hornsey (2016) suggest that the development of a superordinate group identity can support the shift from 'them versus us' to a 'we' mentality. Fielding and Hornsey (2016) also suggest other ways the social identity theory could be used to support pro-environmental behaviour, such as belonging to a pro-environmental group and promoting pro-environmental norms within the in-group to increase pro-environmental behaviours. This suggests that EPs could draw on the social identity theory to help adults understand how CYP are experiencing climate change and to support pro-environmental behaviour. EPs could also do this by promoting

the development of climate-action groups in schools and encouraging CYP to reflect on their previous pro-environmental actions to increase the salience of their pro-environmental identity. EPs could also draw on Allport's contact hypothesis (1954) by promoting the importance of CYP who are engaged in climate action receiving opportunities to have positive interactions with apathetic others to build shared understanding and reduce prejudice to move from the 'them versus us' to a 'we' mentality.

As reflected in the wider literature, the CYP seemed to experience a sense of powerlessness and not feeling heard by others, e.g., "*The government isn't listening. People in general aren't listening*" (Aaron Nicholas, lines 412-413). This highlights the importance of EPs and educational practitioners providing CYP with opportunities to talk about their feelings and for adults to genuinely listen, alongside promoting a sense of agency and empowerment, whilst avoiding positioning CYP as 'rescuers' and burdening them with the responsibility to fix the issue (Tannock & Tannock, 2021). As the CYP seemed to experience a sense of being alone in the fight this stresses the importance that CYP have regular opportunities to connect with like-minded eco-empathetic individuals to support them to feel less isolated and/or dismissed. It is documented in the wider literature that forming connections with others engaged in climate action can support psychological well-being through meeting individuals' needs for belonging by feeling part of a community and providing a sense of solidarity and counteract feelings of isolation (Budziszewska and Głód, 2021; Gallay et al., 2022; Karsgaard & Davidson, 2021; Nairn, 2019; Ojala, 2017). EPs should therefore consider ways to support and promote opportunities for eco-empathetic individuals to socialise and form connections with like-minded others.

Nature Connectedness

Humans arguably have an unconscious and deep-rooted connection with nature due to our intrinsic interdependence (Rosak, 1992) and nature connectedness is argued to support both psychological well-being and pro-environmental behaviours (e.g., Capaldi, Dopko & Zelenski, 2014; Mayer & Frantz, 2004; Nisbet, Zelenski & Murphy, 2011). The CYP in this study seemed to have a strong sense of connection to the natural world and they seemed to experience a sense of existential guilt perhaps arising from their 'ecological unconscious' (Rosak, 1992). As well as Rosak's (1992) notion of the 'ecological unconscious', I also drew on Marxist ideology and the metabolic rift theory (Foster, 1999) to explore this concept of nature dis/connectedness. These theories stress the importance of re-establishing humanity's connection with nature in order to awaken the ecological unconscious within us, and reconceptualise the value of nature, leading to pro-environmental behaviour and supporting sustainability. This feels particularly important given that individuals in the UK are

generally experiencing low levels of nature connectedness (Richardson et al., 2022). EPs should reflect on the concept of nature connectedness both as a means of supporting wellbeing and increasing feelings of responsibility towards the planet to mobilise action. To foster nature connectedness, EPs could advocate for CYP to have increased contact with nature and consider way in which they could support CYP to expand their concept of self to include the natural world through practices which value and recognise their connection to nature. Advocating for CYP to have increased contact with nature, may also support CYP to cope with difficult feelings relating to climate change (e.g., Gunasiri et al., 2022). Training EPs deliver relating to supporting CYPs well-being may be a particularly effective way to explore these ideas with educational practitioners.

Context

This research emphasises the importance of viewing CYP as embedded within their context, rather than in isolation. Heidegger argues the meaning we make from our experiences is enmeshed within our contexts (Horrigan-Kelly, Millar & Dowling, 2016; Smith et al., 2022) and the ecological systems framework (Bronfenbrenner, 1979; 1986) similarly views individuals as inseparable from the world they occupy, demonstrating how individuals are shaped by layers of interacting systems. Drawing on Bronfenbrenner's framework, the CYP's experiences in this research seemed shaped by the exosystem (e.g., perceived governmental inaction), mesosystem (e.g., noticing changes to the local environment) and microsystem (e.g., CYP's emotional responses seemed closely connected to the responses of others, with CYP experiencing a firmer sense of hope when describing the pro-environmental actions of others and, in turn, experiencing a more fragile hope when expressing scepticism about others' lack of action). The chronosystem (i.e., the influence of changes over time) is also pertinent to reflect on given climate change is a threat of the current time, therefore CYP will be experiencing climate change differently to previous generations. This means EPs should consider that CYP are currently living within the context of a climate crisis and therefore CYP's responses, whether denial, apathy or fear, should not be dismissed, as that would be to disregard an aspect of who they are. Giving mind to intersubjectivity, the way EPs interpret the experiences of CYP is shaped by their own experiences, therefore EPs should also reflect on their own thoughts and feelings towards climate change.

Power, Threat, Meaning Framework

A further theory which may support EPs understanding of how CYP are experiencing climate change is the Power Threat Meaning Framework (PTMF) (Johnstone & Boyle, 2018). The

PTMF feels particularly pertinent to the climate crisis as it offers a non-pathologising understanding of emotional distress and emphasises the connection between broader contextual factors (e.g., injustice, inequality) and human pain (Morgan et al., 2022). The use of the PTMF potentially offers an alternative to the use of climate anxiety scales (e.g., (Clayton & Karazia, 2020; Hogg et al., 2021; Stewart, 2021) which arguably reinforce within-person discourses that may be counterproductive to social change (Cohen, 2017; Eccleston, 2004). The model has previously been applied to understanding climate-related distress in South Africa (Barnwell, Stroud & Watson, 2020) and Morgan et al. (2022) explore more broadly how the PTMF may support understanding emotional responses to climate change.

Drawing on the experiences of the CYP in this study, I demonstrate how the PTMF could be used to support understanding of how CYP are experiencing climate change:

Power

The PTMF asks, '*How is Power operating in your life?*'; for th CYP, power was experienced as unequal and seen as residing with influential political figures (i.e., the government). The CYP did not see themselves as having the power to challenge or influence the perspectives of others. Morgan et al. (2022) introduced the concept of ecological power, which encompasses a sense that our ecosystems can keep us alive. This resonates with the CYP's feelings of connectedness to the planet and the planet feeling fragile and precious.

Threat

The PTFM asks, '*What kinds of Threats does this pose?*'. Threats the CYP experienced included: threats to nature, animal species, their lives and their futures. They experienced threats through a sense of others not listening (i.e., invalidation), by the lack of action of others, and a sense of being alone in the fight (i.e., a threat to relatedness to others). Broadly, the CYP seemed to experience climate change as an existential threat; a sense the world as we know it is changing. The threat CYP experienced also extended to other existential threats to humanity, such as war and weapons of mass destruction. This relates to the theory of 'affect generalisation' and the concept of a 'polycrisis' as environmental and social issues interconnect and compound one another.

Meaning

The PTFM asks, '*What sense did you make of it?*'. In this study, CYP's meaning-making is explored in depth within the Results chapter. They seemed to experience meanings including powerlessness, guilt (predominantly collectively, with one participant experiencing individual guilt), grief (related to current and anticipated losses), responsibility to the planet,

injustice and dismay towards those deemed responsible, as well as isolation by those who are not taking the threats seriously.

I tentatively suggest the PTMF could be a useful framework for EPs to draw upon to support understanding of how CYP are responding to climate change and in doing so, provide more sensitive, attuned responses to CYP. Further, EPs could draw on this framework to consider how to support CYP to recognise threats, contemplate who/where power is held and think collectively to construct meaning and action. In this way, the PTMF could be used to validate CYP's experiences of climate change, avoid pathologisation, and support social change.

EP's responsibility for climate action

As reflected in the wider literature, in this study CYP expressed concern about climate change, they perceived it as an existential threat and seemed to experience a fear of what the future holds. Therefore, there is an ethical responsibility for those in positions of power, particularly EPs who work with the population disproportionally affected by climate change, to act.

Importantly, attention paid towards climate change within educational psychology appears to be on the rise; for instance, the BPS DECP discussion paper highlighted the relevance and importance of the climate crisis to EP practice (O'Hare, 2022a), a motion on climate change was passed at the Association of Educational Psychology (AEP) Annual General Meeting in 2019 to reduce the profession's carbon footprint (AEP, 2021) and the BPS has launched a climate action co-ordinating group with two EPs as members (BPS, 2023). We need to continue building on this momentum; for instance, by drawing on the AEP's motion within EPs services and making concerted efforts to reduce our carbon footprint. Building on the AEP's motion, perhaps a position paper by the AEP may be supportive in furthering these aims.

EPs have a moral obligation to respond politically to the situation, "After all, if we are passing on an inhabitable planet to our next generation, the good work we do in supporting the psychological and emotional needs is futile" (Allen, 2020, p.2). Reflecting on Saito's eco-socialist ideas and his notion of 'degrowth communism', perhaps to respond politically EPs need to have increased awareness and understanding of how social and environmental issues interconnect to perpetuate social and economic inequality. The recognition that matters relating to equality need to be embedded throughout all areas of EP practice (HCPC, 2023) further strengthens the suggestion that EPs need to respond politically. With

reference to the concept of the figure/ground relationship from Gestalt therapy (i.e., the background shapes our interpretation of the foreground), while the extreme weather events of climate change may be the object of our attention and be more ‘figural’, considering the interconnected and underlying factors that are in the ‘ground’, such as capitalist ideology, political policies and social inequalities, may help us to think more systemically and holistically. Whilst reversing certain capitalist structures and principles would require major political, economic and social reform, I suggest that EPs can still respond politically through activism and advocating for and supporting the development and implementation of approaches based on sustainability.

Chapter 5: Conclusion

Here, I outline the main conclusions, explore limitations, revisit the quality markers for qualitative research and IPA and discuss possible directions for future research.

5.1 Conclusions

This study aimed to develop an understanding of how CYP engaged in climate change action within a Western cultural context, are experiencing climate change. Adopting a phenomenological position and using IPA as a methodology, I carried out semi-structured interviews with three CYP aged 13-16 years who were part of a climate-action group at secondary school. Individual accounts were analysed before a cross-case analysis in which I identified seven overarching group-level themes.

CYP's connection to the planet was threaded throughout their accounts and the difficult feelings they experienced seemed to arise from a place of love and care for Earth. CYP's connection to the natural world went beyond aesthetic beauty, appreciating nature's life-supporting functions. An awareness of the fragility of nature and the precariousness of the current situation seemed to heighten the preciousness of the planet to the CYP. Intertwined with CYP's connection to the planet, CYP seemed to experience a sense of loss and grief concerning environmental destruction. CYP conveyed a sense of permanence; something of value was lost, unable to be replaced. Alongside this was a sense of anticipated loss, as further destruction felt inevitable to the CYP. CYP also seemed to experience a sense of guilt and remorse which, again, was closely connected to CYP's deep feelings of respect and care for the planet. The guilt CYP experienced was predominantly collective, with a palpable sense they saw the planet as having given humanity the gift of life, and humanity having betrayed the planet in return. This appeared to weigh heavily on the CYP.

For the CYP, the threat of climate change looms and danger feels perilously close, leading to a sense of insecurity and fear towards the future. CYP conveyed a feeling we are running out of time before we reach a tipping point, alluding to a sense of standing on the precipice. For the CYP, the existential threat of climate change also appeared to tap into a nerve of other forms of destruction. This alluded to a broader sense of threat the CYP seemed to be experiencing beyond the climate crisis. Despite this sense of threat, each CYP appeared to experience a flicker of hope that things could get better and a possibility that positive change remains within reach. While CYP appeared to experience this to varying extents, and often

fleeting, there was a general feeling there is still a chance for humanity to overcome the climate-related challenges we are facing.

The CYP also seemed to separate themselves from others, perceiving the 'other' as an adversary, responsible for climate change. This encompassed a sense of disappointment, frustration and incredulity towards others, a sense of suspicion and distrust, particularly towards more powerful others, and a sense of injustice inflicted by the 'other'. CYP also seemed to experience a sense of powerlessness, perceiving themselves as having less power or the power as residing with the 'other' and a sense of separation from others alluding to them feeling they are alone in the fight.

EP implications were considered, and these included the need for awareness of the nature of CYP's experiences relating to climate change, advocating for CYP to have opportunities to talk about their experiences with others and for adults to genuinely listen and validate the pain experienced. I tentatively suggest the PTMF may be a useful model for EPs to draw upon to support understanding of how CYP are responding to climate change, and I emphasise EPs' broader responsibility towards climate action with a focus on EP's duty to respond politically to the situation.

5.2 Limitations

Within this section, I reflect on the methodological limitations of this research, including those relating to the participant sample and data collection and analysis. I subsequently revisit the quality and trustworthiness of the research.

Firstly, the sample size for this research was smaller than anticipated. Whilst samples for IPA research are typically small, a sample of three presented a challenge for group-level analysis. However, I decided there was value in the group analysis as there was a degree of coherence across accounts. Further, the participants were all males and attended the same school within a specific geographical location. Whilst IPA research does not strive for generalisability, having a more varied sample may have allowed for a broader range of diverse voices. This narrow sample has limitations on the transferability of the research; for instance, gender differences appear to have an impact on CYP's experiences of climate change, with girls seemingly experiencing greater levels of distress, seeing climate change as a bigger threat, whilst simultaneously feeling more hopeful (Finnegan, 2023; Ratinen &

Uusiautti, 2020; Stevenson, Peterson & Bondell, 2019). Further, there has been little research thus far on how CYP from diverse communities are experiencing climate change (including this research), with research predominantly focusing on white populations within industrialised countries. This arguably "centres the experience of white, wealthy communities" (Ramadan et al., 2023, p. 560).

In this research, I did not specify participants must be able to clearly articulate themselves. However, this addition within the inclusion criteria may have been supportive, given the effectiveness of IPA relies on individuals' ability to effectively convey the shades and textures of their experiences (Willig, 2013).

Being part of a climate-action group, the participants had an existing interest in the research which will likely have impacted the way they are experiencing climate change compared to others.

As an IPA novice, it took time to gain familiarity and build confidence in interviewing participants in a phenomenological manner. As noted within the methodology, the interview prompts were supportive as was piloting the interview schedule. However, for the first participant, I found it difficult to reflect in action, thus having an additional pilot participant would have been further supportive.

A limitation of my data analysis is that my prior experiences and assumptions will have shaped how I made sense of the CYP's experiences (Willig, 2013). For instance, as I perceive climate change as political, perhaps that shaped how I interpreted participants' responses as relating to a sense of injustice. Within my position statement, I also note my interest in the natural world which may have influenced my development of the theme 'Appreciating and cherishing nature'. IPA acknowledges the impact of researchers' contexts and to address this issue I have attempted to be transparent, providing my reflections using reflective boxes throughout the analysis.

A broader issue with this research relates to the research aim and questions. It could be argued the very nature of looking inward at emotional responses to climate change, reinforces within-person discourses which pathologise justified human pain and inhibits real social change. Perhaps instead we should be focusing our efforts on looking outward, by challenging structural inequality and political systems (i.e., by mitigating the impacts of climate change).

5.3 Future Directions

Having considered the strengths and limitations of my research, I finally suggest areas of further research.

Given the connections CYP made between the climate crisis and other forms of threat, it seems important further research is carried out to explore how CYP are experiencing current global threats, how CYP are making connections between them and whether CYP's experiences of multiple threats compound one another. It will also be important to consider the implications for CYP's broader sense of well-being and how EPs can best support them.

It would be beneficial to conduct further IPA research in different geographical regions, with different aged students (e.g., Key Stage 2 or 4 students) to explore how they are experiencing climate change. Given climate change will disproportionally affect younger generations, it feels particularly important to shift the balance and power and allow CYP to shape the research. As a result, participatory research with CYP to understand their experiences is a potential area of research. Further research could also be carried out with parents/carers and school staff to see how they are making sense of the climate crisis.

Finally, further research must be conducted to explore how CYP from diverse backgrounds (e.g., those from low-middle income countries and different cultures) are experiencing climate change. This is imperative given most research has focused predominantly on white populations within industrialised countries. This is particularly important given communities from lower-income countries are disproportionally affected by impacts of climate change, despite having contributed to the situation the least due to the intersection between economics, political and environmental issues (Baer, 2012; IPCC, 2023).

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Appendices

Appendix 1: Psychological implications of the direct impacts of climate change

Direct Impacts of Extreme Weather Events

Most research exploring the psychological implications of climate change concentrates on the direct impacts of extreme weather events such as heatwaves, wildfires, floods, and hurricanes (Léger-Goodes et al., 2022; Ramadan et al., 2023). Such extreme weather events can result in loss of human life, pets and livestock, illness or injury, loss or damage to community, home, business, and belongings (Clayton et al., 2017). Consequently, these life-changing events can have a large impact on the mental health and wellbeing of affected individuals, families and communities. It is estimated between a quarter and a half of individuals who are affected by extreme weather events experience adverse mental health outcomes (Shukla, 2013). The impact on mental health is often measured in terms of diagnostic outcomes, with research suggesting these events can lead to increased rates of mental health diagnoses, including depression, anxiety, acute stress disorder and post-traumatic stress disorder (PTSD) (Cianconi, Betrò & Janiri, 2020; Clayton et al., 2017; Hayes et al., 2018; Hrabok, Delorme & Agyapong, 2020; Trombley, Chalupka & Anderko, 2017). Despite varying diagnoses, they arguably represent some form of psychological trauma and can be associated with experiencing a range of emotions, including grief, anger, distress, hopelessness, helplessness, and a loss of identity (Clayton et al., 2017; Lawrance et al., 2021; Sanson, Van Hoorn & Burke, 2019). Research also suggests these events can increase the risk of suicide and suicidal thoughts, aggression, violence and substance misuse (Clayton et al., 2017).

Long-term Direct Impacts of Extreme Weather Events

Extreme weather events described above can create ripple effects which can impact mental health in a variety of ways. Immediate direct impacts of an extreme weather event can lead to longer-term direct impacts, including forced displacement, changes in relationships with

parents/caregivers, changes to schooling and food and water insecurity, all of which can interact and have knock-on mental health impacts (Dooley et al., 2021; Lawrance et al., 2021).

Chronic and Gradual Impacts of Climate Change

Research suggests that chronic, gradual effects of climate change (such as rising sea levels and rising temperatures) can also impact the mental health and well-being of those affected (Clayton et al., 2017). It is thought these chronic effects may have more gradual, long-term impacts on well-being through their impact on food and water supplies, the economy and migration which are related to stress, grief, and increased rates of mental health diagnoses (Dooley et al., 2021; Léger-Goodes et al., 2022). Increased temperatures have been linked to an increase in aggression and violence, possibly because higher temperatures are associated with discomfort, possibly leading to irritability and a reduction in an individual's ability to self-regulate (Miles-Novelo & Anderson, 2019). Whilst it is difficult to explicitly link increasing temperatures with mental health, there is an increasing body of research indicating that heat can have a detrimental effect on mental functioning (Clayton, 2020). Effects of drought are also thought to have a significant impact on human wellbeing; in a study exploring the impact of prolonged drought on Australian teenagers, individuals described how drought affected them at different systemic levels (Dean & Stain, 2010). They discussed the negative effects on family life due to stress, the impact on the local community due to migration and they expressed concern for the environment as well as uncertainty about the future (Dean & Stain, 2010). Drought can also have economic consequences and result in food and water shortages, increasing hunger, thirst, and distress (Clemens, von Hirschhausen & Fegert, 2020; Cole & Tembo, 2011).

Appendix 2: Research Poster

Appendix 3: Parent/Carer and CYP Information Sheets

Exploring Experiences of Climate Change

Parent/Carer Information Sheet

My name is Rachel Dennan and I am a Trainee Educational Psychologist studying for a Doctorate in Educational and Child Psychology at the University of Sheffield. I am conducting a research project with children and young people who are part of a climate or eco-action group at school to explore their thoughts and feelings towards climate change.

Please take the time to read the following information carefully and discuss it with your child before you decide whether you would like your child to take part. It is important for you to understand why the research is being done and what it will involve. Please ask if you would like further information or if there is anything that is unclear.

What is the project's purpose?

This research project is about exploring children and young people's thoughts and feelings towards climate change. The main purpose is to see how they are experiencing the narratives around climate change and to consider what Educational Psychologists can learn from this.

Why has your child been chosen to take part?

Your child has been invited to take part in the study because they have been identified as meeting the following selection criteria:

- Aged 13-16
- Part of a climate or eco-action group at school

Does your child have to take part?

Your child's participation is entirely voluntary. It is up to you decide whether or not you want your child to take part. If you decide that you would like your child to take part, you will be asked to sign a consent form. Your child will also be given a consent form to sign if they would like to take part in the research. Both you and/or your child can withdraw from the research project at any time. You do not have to give a reason to withdraw. If you wish to withdraw from the research, please contact the lead researcher (see contact details below).

How will the research be carried out?

The research will be carried out either in the autumn term 2023 or spring term 2024. The research comprises of several steps.

Step 1: After responding to any further questions/queries and the return of completed parent and child consent forms I will have an initial meeting with your child in school. This aim of this session is to help your child feel comfortable with the research and to decide whether they wish to create a digital collage using Google Jamboard or a scrapbook collage. This session will last approximately 20 minutes.

Step 2: Over a period of 2 – 3 weeks your child will develop either a digital collage using Google Jamboard or a scrapbook collage. If they want to make a digital collage, I will give them a link to the Google Jamboard. They will be able to access the Jamboard through a computer or laptop. They will add a drawing, photo, word, phrase, image, symbol or colour to the collage after climate change enters their mind representing how they felt in that moment. After 2 - 3 weeks they will have developed a collage reflecting how they feel about climate change.

Step 3: During this session I will explore your child's collage with them, and they will discuss their thoughts and feelings in relation to each item on their collage. This session will last up to an hour and will be audio recorded. At the end of the interview, I will have a debriefing conversation with your child to check-in with how they are feeling, ask them about how they experienced the interview and research process, and if they wish for any information to be withdrawn.

Step 4 (optional): Your child will be offered an individual debrief to feedback findings.

Step 5 (optional): Your child will be offered the opportunity to be involved in sharing the findings (e.g., to the wider climate action group at school). The extent to which your child will be involved in this will be up to them.

Will I or my child be paid for this research?

No, there is no money being offered for this research.

What are the possible disadvantages and risks of taking part?

As your child belongs to a climate or eco-action group this suggests that they care about the climate. As a result, there is a potential risk that they may have an emotional response when sharing their thoughts and feelings towards climate change. Consequently, a key adult will be identified at school to provide any follow-up support if necessary. It is also hoped that the climate action group can offer some support if difficult feelings arise from taking part in the

research. The risk of distress is further reduced because from my doctoral training and prior work as a primary school teacher I am experienced at conducting interviews in a sensitive manner, as well as listening and responding to children's emotional needs with empathy.

If your child becomes upset or has an emotional response during the interview, they will be reminded that they can pause/stop at any moment. They will also be reminded that they do not have to answer certain questions and of their right to fully withdraw should they wish. If I feel that your child has a strong emotional response or appears distressed, I will stop the interview and will respond in a supportive manner.

If you are concerned that your child is experiencing distress and/or anxiety around climate change there are resources and information available from a range of organisations including UNICEF, Bupa and the Royal Collage of Psychiatrists. I will also offer to deliver a workshop around self-care tips for worry/anxiety around climate change to the eco-action group. Please contact me for further information.

What are the possible benefits of taking part?

It is hoped that taking part in this research project will be an enjoyable experience for the children and young people involved and it will be an opportunity for their voices to be heard. The information gained from this study may also have implications for increasing awareness and understanding of how children and young people are experiencing climate change. It is important that Educational Psychologists develop a deeper understanding of children and young people's thoughts and feelings around the climate crisis so we can learn how best to provide support to children, families, and schools.

Will my child's identity in this project be kept confidential?

Ethical guidelines will be followed and all information that is collected from your child's involvement in the project will be kept confidential. During the research tasks, participants may adopt a pseudonym, which they will be referred to. Your child's name will not be used in the write up of the report. Family relationships or professional roles may be referred to (e.g., sister, teacher), however no person, third parties or schools will be named. Your child will be able to inform me at any point, if there is anything that they would like to be left out. If, for any reason, I become concerned about your child's or others' safety and/or wellbeing, I am obliged to pass on this information to the school's Designated Safeguarding Lead.

What if a safeguarding issue is raised?

Should your child disclose a safeguarding issue to me, the school's safeguarding procedures will be followed, and this information will be shared with the relevant staff (the school's Designated Safeguarding Lead). This information will also be shared with the research supervisor, Sahaja Davis (the research project's Designated Safeguarding Contact).

What is the legal basis for processing my personal data?

According to General Data Protection Regulation (applicable in the UK and EU from 25 May 2018), we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)).

How will the data be stored and used?

A scan/download of the collage produced by your child will be stored on a secure online storage system approved by the University of Sheffield. Audio recordings of interviews will also be stored on the secure online storage system and will be destroyed once they have been transcribed. The transcribed interviews will be stored electronically on the secure online storage system approved by the university. Upon completion of the project, additional copies of the data will be destroyed. Data will be securely stored and archived within university systems for the period of two years after the completion of the project, after which it will be safely destroyed.

What will happen to the results of the research project?

The research findings will be written up and included in a thesis and may be published in a journal. Your child and their school will not be identified in any reports or publications. Children who participate in the research will receive a debriefing conversation at the end of the interview and they will be offered a more in-depth debrief at a later date to feedback findings. You will be informed of the research findings, once the thesis is completed, summarizing key findings from the research project. You will be informed if the data is published in a journal and asked if you would like a copy of the report.

General findings, which may help us develop a deeper understanding of children and young people's thoughts and feelings around the climate crisis may be shared with other Educational Psychologists, educational professionals, and climate change groups/organisations. In the future this research, along with other research on the same topic, may have implications for how Educational Psychologists provide support to children, families, and schools.

Who is organising and funding the research?

The research project is part of the requirements for completion of my Doctorate in Educational and Child Psychology and does not have any sponsorship or funding.

Who is the Data Controller?

The University of Sheffield will act as the Data Controller for this study. This means that the University is responsible for looking after your information and using it properly.

Who has ethically reviewed the project?

This project has been ethically approved via The University of Sheffield's School of Education ethics review procedure.

What if something goes wrong and I wish to complain about the research or report a concern or incident?

If there is concern about any aspect of this research project, it should be addressed by contacting the researcher or research supervisor (see below for contact details).

Should you feel that your complaint has not been handled to your satisfaction, you can contact the University's Head of the Education Department: Professor Rebecca Lawthom. University of Sheffield. School of Education. Edgar Allen House 241 Glossop Road Sheffield S10 2GW. Email: r.lawthom@sheffield.ac.uk

If the complaint relates to how your personal data has been handled, you can find information about how to raise a complaint in the University's Privacy Notice: https://www.sheffield.ac.uk/govern/data-protection/privacy/general

Contact details for further information

Please contact me if you have any queries or need any further information.

My contact details are: Rdennan1@sheffield.ac.uk

The Researcher Supervisor for this project is Dr. Sahaja Davis and his contact details are as follows, should you wish to contact him: t.s.davis@sheffield.ac.uk

Finally…You will be given a copy of this information sheet and a signed consent form to keep.

Thank you for taking the time to read this information.

Exploring Experiences of Climate Change

Student Information Sheet

What is this research about?

- This research project aims to explore your thoughts and feelings towards climate change.
- I am interested in how you are experiencing and making sense of what you are hearing or seeing about climate change.
- If you are interested in this research, please read further. It is your choice whether you choose to take part or not.

Why have you been chosen to take part?

- You are part of a climate or eco-action group at school
- You are aged 13-16

What will I have to do?

Step 1 → Meeting

After completing the consent forms and I have answered any questions you have, we will meet at school. This aim of this session is to help you feel comfortable with the research and to decide if you want to make a digital collage or scrapbook collage. This will last 20 minutes.

Step 2 → Collage making.

Over 2 to 3 weeks you will develop either a digital collage using Google Jamboard or a scrapbook college. If you want to make a digital collage, I will give you a link to the Google Jamboard. You will be able to access the Jamboard through a computer or laptop. You will add an aretefact (e.g., a drawing, photo, word, phrase, image, symbol or colour) to the collage after climate change enters your mind to show how you felt in that moment.

Step 3 → Discussion

We will meet to discuss the collage you have made. I will ask you to tell me about the artefacts you have recorded on the collage and about what you were thinking and feeling. This will last up to an hour. This will be audio-recorded so I can listen back and write down what was said.

Steps 4 and 5 → Follow-up (optional)

I will meet with you again at school to share some thoughts I have had about your experiences. I will ask you if you would like to be involved in sharing the findings (e.g., to the rest of the climate action group at school). This is completely up to you.

What are the possible benefits of taking part?

- Sharing your thoughts and feelings and being listened to by someone who is interested in your experiences can make you feel good.
- Information gained may help adults to understand how children and young people are thinking and feeling about climate change. In the future this may help us learn how best to provide support to children, families and schools.

What are the possible disadvantages and risks of taking part?

- During the research process you might think about things relating to the climate that cause you to become upset.
- To support you there will be an identified adult at school you can talk to if necessary.
- If you are feeling uncomfortable at any point during the research you can tell an adult. During the discussion about your collage if you want to stop at any point but don't feel comfortable to say you can show a red card and we will pause the conversation.
- If you feel worried about the climate during the research, I can share some resources and guidance with you that has been produced by different organisations. If your school are happy for me to, I can also deliver a workshop around self-care tips for worry/anxiety around climate change to the eco-action group.

Will my name be used? Will my identity in this project be kept confidential?

- Your name will not be used in the notes, feedback or the final write up.
- A pseudonym will be used instead. You can pick the pseudonym if you would like.
- If you include any photographs of yourself or other people or any other identifiable information in your collage, we will discuss how you would like to anonymise the images (e.g., using an emoji to cover a face).
- If for any reason I become concerned about your safety, or the safety of someone else, I will need to share this information with your school's safeguarding lead and with the research project's safeguarding contact at Sheffield University.

What will happen to the results of the research project?

- The research findings will be written up. They will be included in a thesis and may be published in a journal.
- Once the project is completed you will receive a leaflet summarizing the key findings.
- You will not be identified in any reports or publications and nor will your school.
- If the findings are published in a journal, you will be asked if you would like a copy of the report.
- General findings may be shared with other Educational Psychologists, educational professionals, and climate change groups.

What if something goes wrong?

If you are worried or unhappy about anything during or after the research project, please contact me or let another adult know.

What happens if I change my mind about taking part?

You can let me, or another adult know at any time if you no longer wish to take part.

When will the study begin and end?

You will be involved in the research process in the Autumn term 2023 and Spring team 2024. I will then write the research project up and it will be completed in Summer 2024.

What happens next?

If you are interested in taking part, please discuss this with your parents/carers and give them a parental information sheet and consent form.

Contact for further information

Please feel free to contact me or my research supervisor to ask me any questions about the research using the contact details provided below.

Name of researcher: Rachel Dennan	Name of research supervisor: Sahaja Davis
Rdennan1@sheffield.ac.uk	t.s.davis@sheffield.ac.uk

Finally…

You will be given a copy of this information sheet and a signed consent form to keep.

Thank you for taking the time to read this information.

Appendix 4: Parent/Carer and CYP Consent Forms

Exploring Experiences of Climate Change

Parent/Carer Consent Form

Please tick the appropriate boxes	Yes	No
Taking Part in the Project		
I agree that my child can take part in the project.		
I have read and understood the project information sheet and I have been given the opportunity to ask questions about the project.		
I understand that taking part in the project will include the following: • My child will develop either a digital collage using Google Jamboard OR a scrapbook collage over 2 – 3 weeks. Google Jamboard can be accessed through a computer or laptop. • Your child will be able to choose whether they wish to create a digital or physical college. • They will add a drawing, photo, word, phrase, image, symbol or colour to the collage when climate change enters their mind representing how they felt in that moment. • The researcher will have a discussion with your child about their collage, exploring their recent thoughts and feelings towards climate change. This session will last up to an hour.		
I understand that the discussion about the collage will be audio-recorded. I agree to my child being audio-recorded and for transcripts of these anonymised audio recordings to be used in the research.		
I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement nor is it intended to create an employment relationship with the University of Sheffield.		
I understand that my child's participation in the study is voluntary and that both I and they are free to withdraw consent without giving a reason, up to 7 days after the research project has finished. There will be no adverse consequences if I or they choose to withdraw.		
How my child's information will be used during and after the project		
I understand that personal details such as my name or my child's name will not be revealed to people outside the project.		
I understand that the research findings will be shared with other researchers, psychologists, local authority employees and University of Sheffield staff.		
I agree that any data collected may be published in anonymous form in academic books or journals.		

I understand that image/s of my child's collage may be used in publications, reports, web pages, and other research outputs but that any identifiable information in the collage will be anonymised (e.g., names, photographs, street names etc).		
I understand and agree that my child's words may be quoted in publications, reports, web pages, and other research outputs. My child's name will not be used.		
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.		
I understand and agree that other authorised researchers may use my child's data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.		
I understand that the data collected will be stored on the University's Secure Network. This includes the transcripts of the audio recordings and a download/photograph of your child's collage. The audio recordings will be destroyed once they have been transcribed.		
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.		

Name of parent/carer:	Date:	Signature:
Name of lead researcher:	Date:	Signature:

Project contact details for further information:

You can contact the researchers if you have any questions about this research.

Lead Researcher:

Name: Rachel Dennan

Email: rdennan1@sheffield.ac.uk

Research Supervisor:

Name: Dr Sahaja Davis

Email: t.s.davis@sheffield.ac.uk

If in the event of a complaint you wish to contact a person outside the project, contact Professor Rebecca Lawthom (Head of School of Education at The University of Sheffield)

Email: r.lawthom@sheffield.ac.uk

***When completed*:** *1 copy for the Caregiver*, *1 copy for the researcher*

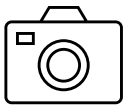
Exploring Experiences of Climate Change

Student Consent Form

Please ensure you have read the information sheet before filling in this form.

If you are happy to take part, please complete and sign the consent form below:

Please read the statements below and tick if you agree with them		✓
	I have read and understood the information about the project.	
	I have had time to think about the research, ask questions and have had these answered.	
	I understand that I can ask to not take part at any point during the research process. I can withdraw up to 7 days after the project has ended, without giving a reason. If I withdraw, my data will be destroyed.	
	I understand that I will create either a digital collage using Google Jamboard OR a scrapbook collage over a few weeks. I can choose which I would prefer. I will add an item to the collage when climate change comes to my mind that represents how I felt in that moment.	
	I understand that I will discuss my collage with the researcher.	
	I understand that my voice will be recorded during the discussion about my collage.	

	I understand that the things I talk about in this research project will be written in a report.	
	I agree for the data collected about me to be used in an anonymised report for publication in a journal.	
	I understand that image/s of my collage may be used but that any identifiable information will be removed (e.g., names, photographs, street names etc).	
	I understand that my words may be quoted but my name will not be used.	

I agree to take part in the research project (circle below):

Name of participant:	Date:	Signature:

Project contact details for further information:

You can contact the researchers if you have any questions about this research.

Researchers:

Name: Rachel Dennan

Email: rdennan1@sheffield.ac.uk

Research Supervisor:

Name: Dr Sahaja Davis

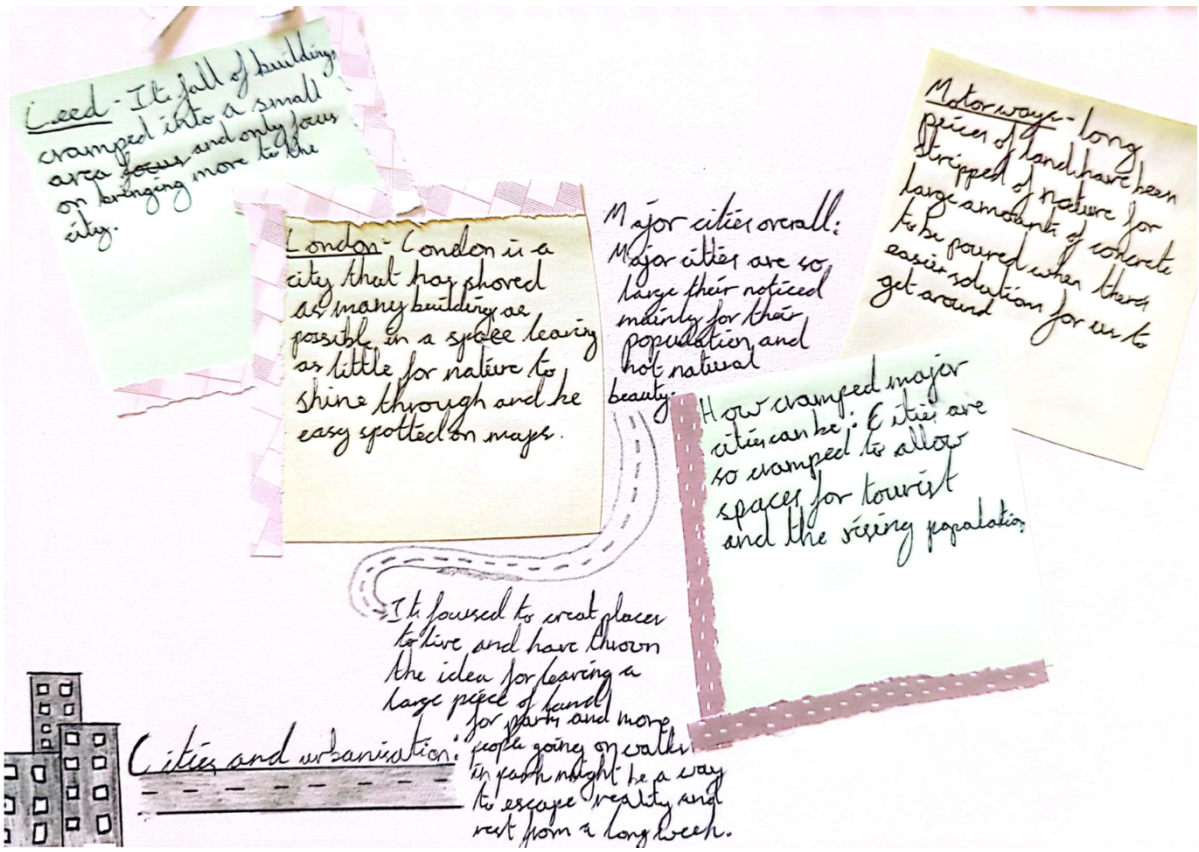
Email: t.s.davis@sheffield.ac.uk

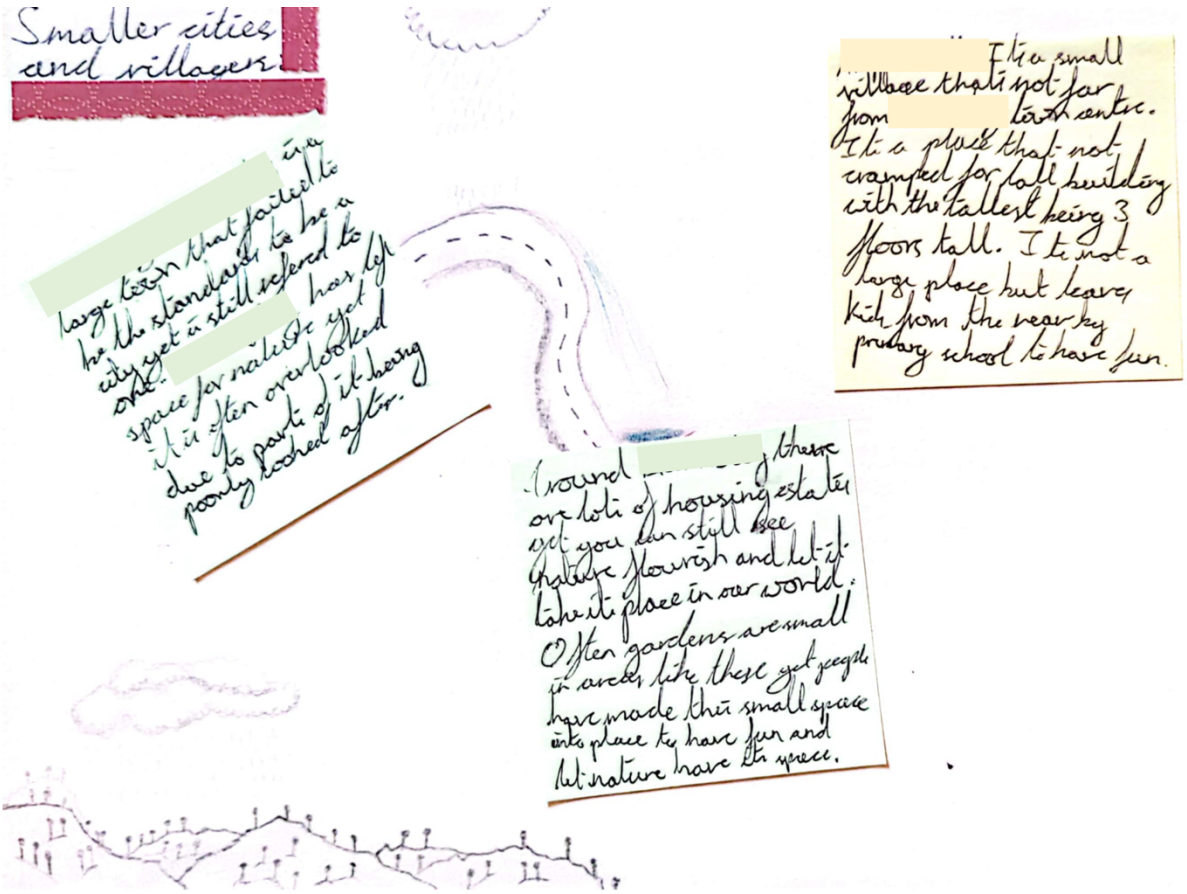
If in the event of a complaint you wish to contact a person outside the project, contact Professor Rebecca Lawthom (Head of the School of Education at The University of Sheffield).

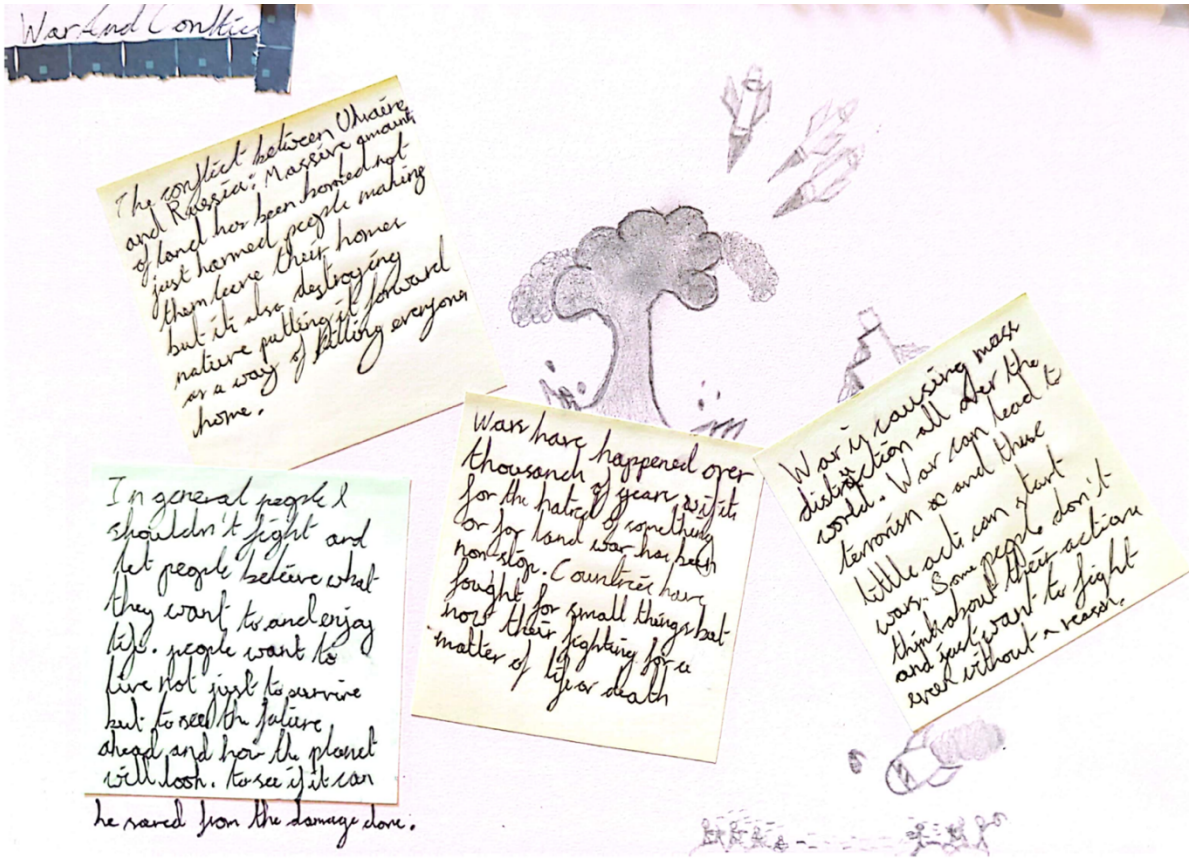
Email: r.lawthom@sheffield.ac.uk

***When completed*:** *1 copy for the student* and *1 copy for the researcher.*

Appendix 5: Jake's Collage






War and Conflict
The conflict between Ukraine and Russia. Massive amounts of land has been bombed not just harmed people making them leave their homes but it also destroying nature putting it forward as a way of killing everyone more.
In general people shouldn't fight and let people believe what they want to and enjoy life. people want to live not just to survive but to see the future ahead and how the planet will look. to see if it can be saved from the damage done.
Wars have happened over thousands of years either for the hatred of something or for land war has been nonstop. Countries have fought for small things but now their fighting for a matter of life or death
War is causing mass distruction all over the world. War can lead to terrorism as well these little acts can start wars. Some people don't think about their actions and just want to fight even without a reason.

Appendix 6: Aaron Nicholas's Collage

Appendix 7: Redbull-Bob's Collage

Appendix 8: Interview Schedule

- *Tell me about…(reference specific parts of the collage)*
- *Can you tell me why chose that (image/word/symbol)?*
- *What does this make you think about?*
- *What does that mean to you?*
- *Tell me what you were thinking?*
- *How do you make sense of that?*
- *How did you feel?*
- *What does that feel like for you?*
- *I'm wondering what it is like for you to be experiencing this?*
- *What is the impact on you?*
- *Which are most important/most meaningful to you?*
- *How do you think these experiences have affected you?*
- *Has the way you think/feel about the climate changed?*
- *What experiences relating to climate change have been the most meaningful or significant?*
- *Can you tell me more about that? (Prompts)*
- *What do you mean by...? (Probes)*

If participants begin to theorise about climate change, I will refer to my interview schedule and ask a question drawing them back to lived experience.

Appendix 9: Excerpt of reflective research diary following interview

Today I completed my first interview for the research project. I feel a mixture of emotions; relief that I have some data and can start the analysis process, panic that the participant discussed other topics (e.g., war), anticipation and eagerness to listen back to the interview. I felt awkward at first which meant that I relied heavily on the set questions as part of my interview schedule. I wonder if this is because I was so focused on getting 'it right'? There were so many things to think about and I found it quite a challenging interview as the discussion meandered onto different topics and so I felt that at times I needed to steer the discussion back on track.

Replaying the interview back has made me feel more hopeful about analysing the data. I think I missed so much when I was conducting the interview – possibly because I was also thinking about follow-up questions and checking the participant's body language as well as checking timings and making sure the recording device was still working etc. My initial thoughts are that his way of experiencing climate change seems to be very existential. He made lots of comments relating to the extinction of societies, species, and humanity. Whilst initially, I thought the comments he made about war were unrelated to climate change, on reflection this does not seem to be by chance. I think he is linking the two - in his mind, humanity keeps repeatedly making the same mistakes leading to the death of animals, wildlife, and humans. I don't think I was able to pick up on this during the interview though as my preoccupation was with ensuring we remained on topic (i.e., climate change). But in retrospect, I can see how he connected them. They all seem to relate to the future feeling unpredictable/uncertain and perhaps reflect a broader sense of threat. Listening back, I also noticed some powerful and emotive quotes e.g., "The planet is a gift but we're the burden" – really evocative! The way he is experiencing climate change is touching – I hadn't anticipated feeling so moved!

Appendix 10: Procedure Checklist

Initial meeting (20 mins)

- ☐ Introductions/rapport building
- ☐ Discuss aim of the session – to help feel comfortable with the research, to answer any other questions you have and to ensure that you understand the next stages of the research.
- ☐ Over a 3 week period you're going to create a collage - either a physical collage/scrapbook or a digital collage using google Jamboard. You will add a photo, a word/phrase, image, symbol or colour representing how they felt in that moment each time climate change enters their mind, in order to create a collage reflecting how they feel about climate change. Discuss pros and cons of physical versus digital collage. Ask which they would prefer.
- ☐ The creative element of the research is discussed and modelled/explored with the participant.
- ☐ Remind the participant not to make additions to the collage during lesson time so that the research has minimal impact on schooling.
- ☐ Ask participant to bring their collage to the next stage of the research process i.e., the semi-structured interview.
- ☐ Ask the participant to choose a pseudonym so that they retain a sense of ownership over their digital collages and their words.
- ☐ Remind participant to contact me if they have any further questions or if they feel the research is having an emotional impact. Contact me via teacher or via parents – school firewall prevents students from emailing anyone outside of the school.
- ☐ Verbally check that participants are happy to continue and remind them of their right to withdraw at any point.
- ☐ Name the key adult identified at school to provide any follow-up support if necessary.
- ☐ Any further questions?

Post- initial meeting checklist:

- ☐ Ensure that the consent form is scanned onto the university's secure network - Google Drive

Interview (no more than 1 hour)

- ☐ Introduction to session e.g., 'We're going to discuss the collage you have made…I'll ask you about the different items on your collage and about what you were thinking and feeling…This will last up to an hour...This will be audio-recorded so I can listen back and write down what was said'.
- ☐ Ensure I have a pseudonym.
- ☐ Give participant a coloured (red) card during the discussion which they can discreetly turn over if they are uncomfortable and do not want/feel able to verbalise this or if they want a break. If a participant turns over the card, pause the interview and provide support/remind participant of their right to withdraw.
- ☐ Remind the participant that they do not have to answer any questions that they don't want to.
- ☐ Remind the participant that they can pause or have a break at any time they wish during the discussion.
- ☐ Remind the ppt of their right to fully withdraw at any point should they wish.
- ☐ Check that the participant is happy to continue.
- ☐ Inform participant that I am about to start the audio recording.

- ☐ Semi-structured interview with participant using the collage or ‘pinboard’ to guide the discussion. No more than one hour.
- ☐ If a participant’s body language indicates that they may wish to withdraw from the research, remind them of their right to withdraw. If a participant becomes upset/has an emotional response during the interview: stop the interview, respond in a supportive manner, remind them that they can pause/stop at any time.
- ☐ Verbally check that participants are happy to continue and remind them of their right to withdraw at any point.

Debrief

Debriefing conversation with each participant after the interview to check-in with how they are feeling.

- ☐ Ask them about how they experienced the interview and research process.
- ☐ Discuss with the participant how they would like any identifiers or photographs of other people to be modified (e.g., an emoji to cover their face/blurred out/covered with a shape).
- ☐ Ask the participant if they would like to keep a pdf copy of the collage. Inform them that they will no longer be able to access or edit the digital collage.
- ☐ Remind ppts that they are able to withdraw their data from the study up to 7 days after the research project has finished.
- ☐ Signpost them to the key adult identified at school to provide any follow-up support if necessary.
- ☐ Ask if they wish for any information to not be included within the thesis.
- ☐ Ensure the participant has my email address and contact information for my supervisor/school of education. Remind the participant to make contact if any issues arise.
- ☐ Participants will be asked if they would like to be provided with a copy of the final thesis.
- ☐ Offer participants individual debriefs at a later date to feedback on findings.

Post-interview checklist

- ☐ Upload recordings onto Google drive and delete from the recording device
- ☐ Scan in physical collage and upload onto Google drive/set the digital collage to private so that the participant is no longer able to access or edit it and download it onto Google drive.
- ☐ Anonymise any identifiers in the collage
- ☐ Transcribe audio recordings – use a pseudonym to identify each transcript and match with the collage.

Dissemination of Findings (optional)

- ☐ Meet with each participant individually at school to share thoughts I have had about their experiences.
- ☐ Ask the participants if they would like to be involved in sharing the group-level findings (e.g., to the climate-action group at school).

Appendix 11: Receipt of Ethical Approval

The University Of Sheffield.

Downloaded: 19/05/2023
Approved: 16/05/2023

Rachel Dennan
Registration number: 210103373
School of Education
Programme: Doctorate in Educational and Child Psychology

Dear Rachel

PROJECT TITLE: How do children and young people, engaged in climate change action, experience the discourses they encounter around climate change?
APPLICATION: Reference Number 052652

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 16/05/2023 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 052652 (form submission date: 05/05/2023); (expected project end date: 29/05/2024).
- Participant information sheet 1120166 version 2 (05/05/2023).
- Participant information sheet 1120167 version 2 (05/05/2023).
- Participant information sheet 1121503 version 1 (05/05/2023).
- Participant information sheet 1121504 version 1 (05/05/2023).
- Participant consent form 1120168 version 1 (14/04/2023).
- Participant consent form 1120169 version 1 (14/04/2023).
- Participant consent form 1121505 version 1 (05/05/2023).
- Participant consent form 1121506 version 1 (05/05/2023).

If during the course of the project you need to deviate significantly from the above-approved documentation please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

James Bradbury
Ethics Administrator
School of Education

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: https://www.sheffield.ac.uk/research-services/ethics-integrity/policy
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.671066!/file/GRIPPolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

Appendix 12: Pilot Study Reflections

My thoughts after the first pilot session:

- She seemed to find my preamble helpful (i.e., explaining what the sessions will consist of, how long etc) – I'll make sure to keep this in.
- She seemed eager to get going and excited to take part – this felt heartening.
- The logistics are tricky – I haven't been able to share the Jamboard with her yet. The school firewall seems to be blocking me from sending her a link to the Jamboard to her email. Not sure what the way forward from this is?
- I had thought that the pilot would be helpful in terms of practicing the interview style etc but I hadn't anticipated how important it would be in ironing out practical issues.

My thoughts after the second pilot session (immediately after the interview):

- She didn't add many items to the collage. I think this was because the collage wasn't to hand (i.e., she had to log onto a laptop/computer to make an addition which made it more onerous). She explained that climate change had however come to mind over the past couple of weeks and did have experiences to discuss in the interview.
- I gave her the red card in case wants to stop at all for a break, to ask a question or if wants to halt or stop the interview. She didn't use the card but kept it by her.
- I felt nervous conducting the first interview, but I wanted to appear relaxed to help put the participant at ease (I didn't want to give off nervous energy!). I tried to use non-threatening body language (e.g., make myself look smaller), convey warmth, relaxed style of interaction etc.
- I found it really helpful having the interview schedule in front of me throughout the interview to act as a prompt.
- I'm really interested to play the audio recording back – I'm not sure if I spoke too much or not enough? I felt concerned that some of the questions I asked were leading – I want to listen carefully back to consider this and make adjustments if needed for the next set of interviews. Did the questions I asked get to the participant's experience?
- Trying to be present and responsive to the participant's comments whilst also referring to the interview schedule and making sure to bring the discussion back to the participant's experience presented a challenge. Having the opportunity to practice this was invaluable.

Participants thoughts and reflections:

- The pilot participant shared that she enjoyed the interview and that it felt 'good for letting it out' – almost as though there was a sense of release from taking part in the research.
- She said that the interview was the 'best bit' and that she felt she had a lot to speak about given that this is something she feels passionate about.
- The participant shared that it had been difficult to access the Google Jamboard to make additions and that it was not very flexible (i.e., there are constraints on what you can do with it).
- She felt that she would have liked the option to create a physical collage (i.e., a scrapbook). They shared that this would be particularly good if you are creative; for instance, you could create textures to represent your feelings (e.g., rip up pieces of paper if you are angry).

Reflections following listening to the audio recording

- I think I successfully drew on the interview schedule to ask questions about the participant's experiences of climate change e.g., *How did that impact on you? How did that make you feel? Does that feel important you? Has the way that you think or feel about climate change changed at all over time? Which experiences have been the most significant or meaningful to you?*
- But was I too reliant on the interview schedule? Perhaps I was too tightly bound to it, and this prevented me from being fully responsive to the participant's comments. Perhaps for the next interviews, I will feel more relaxed, and this may free up space in my mind to pay close attention to what the participant is saying and ask follow-up questions when things are mentioned that may have phenomenological importance.
- From listening back to the audio recording I think I could have been much more curious about her experiences. There are a range of further questions I could have asked:
  e.g., I'm guessing that might be quite troubling for you?
  I'm wondering what that's like for you to know that people aren't doing enough?
  I'm wondering what that must be like for you to know this stuff?
  I think asking these questions and probing deeper would have helped to elicit richer data. This is something I want to not only be mindful of but to act on when I go into the interviews.
- I think I also need to become more comfortable with silence and not try to fill in all the gaps! Pausing may allow the participants to have more thinking time to enable them to make sense of their experiences.

Appendix 13: Excerpts of the Transcript with Exploratory Noting and Experiential Statements

Jake's excerpt

Experiential Statements	Line number	Speaker	Original Transcript	Exploratory notes
A sense of anticipated loss; further destruction feels inevitable *Brewing resentment about the decisions being made*	43 44 45 46 47 48 49 50 51 52	Participant	Yeah, my writing's not the neatest. Erm they've..they've cramped largest cities, you will often see them be larger. Yes, for a rising population but soon they will have to build..build on that and it might make that city expand more, destroying more things. Like motorways, you often see them about in three lanes wide, one maybe bigger. And it's just such large things like just dug it up filled it with concrete and if they'd of, they could have kept an eye on whether it's affecting the road's nature, without having to place down all this concrete. Yeah, I get it, it's for stabilisation, but if they didn't place all these barriers down they could keep an eye on nature and keep it from affecting drivers on the road.	A sense of impending destruction 'soon they will have to build on that' – a feeling of inevitability or unalterable fate. 'Destroying'– powerful word indicative of causing irreparable damage. Indignant tone of 'Yeah, I get it' perhaps pointing to a feeling of bitterness and resentfulness. A sense that the powerful have their priorities mixed up and that their motivations are unjustified.
	53	Interviewer	Yeah, you've mention nature a few times what does that mean for you?	
Distress and anguish in relation to current losses	54 55	Participant	It means just like the earth in general, like, we're destroying what we're living on.	'Destroying' in present tense – it's currently happening – a sense of urgency relating to current losses. 'We're' - suggesting a sense of collective responsibility. Turmoil and anguish over the destruction of the planet.

	56 57	Interviewer	Mmm yeah…'we're destroying what we're living on'…Yeah tell me a bit more about that?	
A sense of species guilt and betrayal *A sense of frustration and injustice*	58 59 60 61 62 63	Participant	It's like we're using the planet to our own advantage yet *we're* not caring for it back. You can see a few organisations helping it back, like, I don't know if they're still open but like team trees and team seas were helping out and there are a few nature reserves around, but I mean, it's just they more care about finding places to live and natural resources, like, erm crude oil, rubber and all that.	'We' – collective. A sense of guilt and betrayal- the planet being taken advantage of. That it isn't being nurtured back– neglected, abandoned. A longing or desire for a respectful interaction with nature A sense that 'they' don't care or have different priorities. Pointing perhaps to a sense of injustice and anger.
	64 65	Interviewer	It sounds like protecting nature is something that feels important, quite important to you?	
	66	Participant	Yeah.	
	67	Interviewer	What does it mean to you to be protecting the earth?	
A sense of collective responsibility to repair the damage to the planet	68 69	Participant	If..if *we* cause it any harm we should find a way to return the favour to help regrow the damage we've done.	A sense of an obligation or duty to give back to the earth. Use of the word 'we' pointing to a sense of collective responsibility.

Aaron Nicholson's excerpt

Experiential Statements	Line number	Speaker	Original Transcript	Exploratory notes
A sense of frustration and exasperation directed towards others *A sense of disconnection and resignation*	36 37 38 39 40 41 42	Participant	It's just that all the evidence is there, and people aren't taking any notice of it. I mean don't get me wrong there's a lot of people doing stuff but it's not… People do stuff that they know is bad for the environment and like chucking litter and stuff like that into the trees. People go out and pick 'em up – so that goes on. People aren't really doing anything about it, it's it's pretty sad because it's..it's only their futures that it's gonna affect innit so yeah.	The evidence is there, and people are aware but still aren't taking action. A feeling that what people are doing is not enough. A sense of disappointment/dismay in people? Feeling let down? Exasperation? 'It's only their futures' – almost sounds defeated here. 'Their futures' could imply a sense of distance/disconnect. A sense of resignation and possibly meaninglessness
	43 44	Interviewer	Yeah, so what's it like for you to *know* that it's going to affect people but they're not doing anything about it?	
A sense of regret and remorse that more has not been done	45 46 47	Participant	It's anxiety and anger that it's…we could've done a lot more stuff to help what's going off now. (Inaudible) Like people wasting money on stuff that they don't need when it could be going to the environment.	'We could've done a lot more' – past tense indicative of regret. Regretful? Possibly a sense of guilt? Describes how people don't have the right priorities.

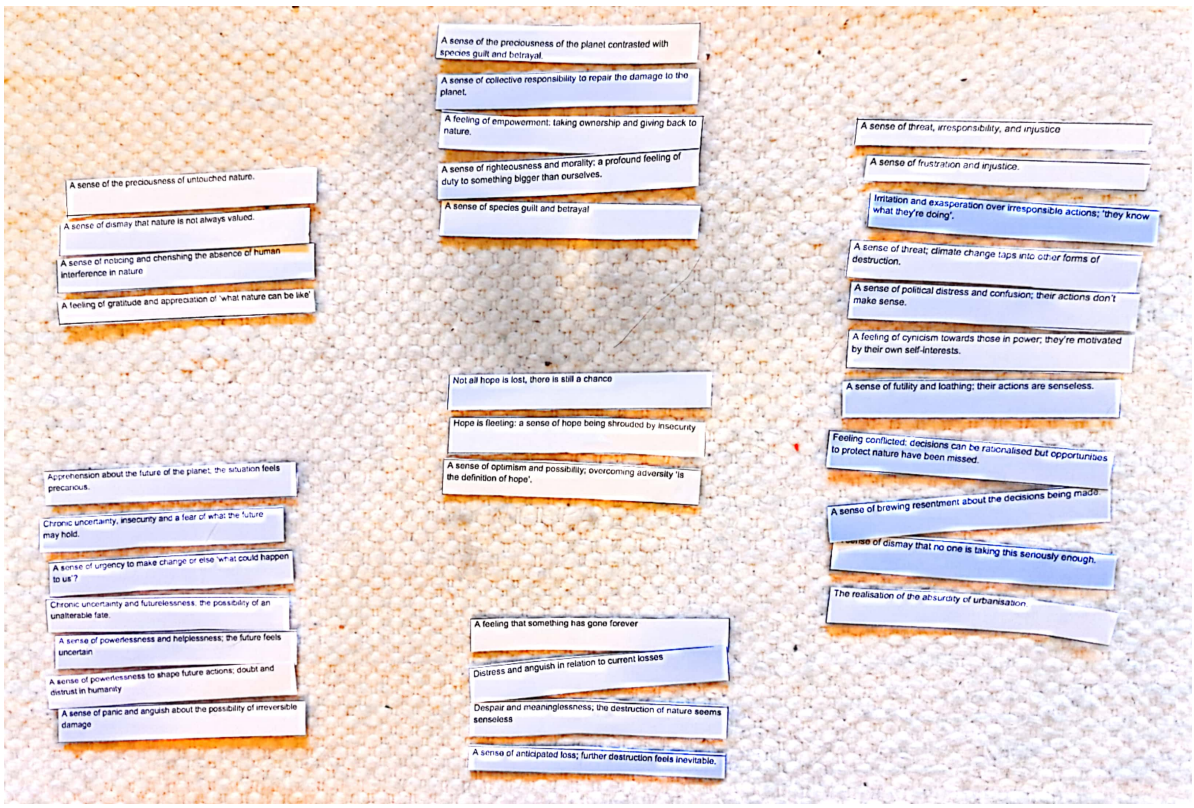
	48	Interviewer	Mmm yeah, so you feel like a lot more could be being done and it's	
	49		making you think a little bit about the future, is that right?	
	50	Participant	Yeah I'm the type of person who thinks into the future basically so yeah.	
	51	Interviewer	Okay and how does that feel for you?	
Feeling disappointed and disenchanted with his generation *An urgent feeling that more could be being done*	52	Participant	It's..it's erm it's pretty concerning because we're supposed to be a	'Supposed' – indicating the opposite. Pointing to disappointment – feeling let down by them perhaps? Or possibly even shame. 'Pushing stuff back' – seemingly referring to U-turn on green targets. Frustrated by the lack of expected progress – a sense of urgency here. 'Not an excuse' – a sense of morality and injustice.
	53		generation of people who care for stuff. And with technology as it is I	
	54		don't see why we couldn't we can't do anything else. I mean we've got	
	55		computers that can do a lot of stuff that we could do for. And yeah, it's	
	56		not really that much of an excuse there still being pollution as such. I	
	57		mean I can understand in LICs [low income countries] and stuff like that	
	58		– they're developing. But HICs [high income countries] are contributing	
	59		the most and they're not..they're pushing stuff back which means there's	
	60		going to be a long term delay. So it's gonna get worse.	

Redbull-Bob's excerpt

Experiential Statements	Line number	Speaker	Original Transcript	Exploratory notes
A sense of responsibility, solidarity, and empowerment to make positive change	12 13 14	Participant	I just thought, if the world leaders are changing it, then we can help as well. And it made me feel a bit anxious and happy cause that's it and I think that's COP22 or summit..like that.	A sense of empowerment that if the world leaders make changes, then others can too - it feels promising and encouraging. Could it point towards feeling inspired perhaps? 'Anxious and happy' – conflicting/contrasting/mixed emotions.
	15 16	Interviewer	Okay, you said it made you feel a bit anxious *and* happy. Could you tell me a bit more about that?	
A sense of threat and fear for the future	17 18 19 20 21	Participant	Well when I felt anxious it's because of err if the world leaders do sort it, it might turn into a even like worser war should I say than it already is. Because err if they're trying to make it more better and then they make eco weapons that are more deadly and silent then it could cause a world war.	Fearful that measures to stop climate change may result in the development of eco-weapons. A sense of threat – concern for the future/uncertainty? Fearful of the future – optimism seems short lived as other threats may then surface – a feeling that finding a solution gives rise to other problems.
	22	Interviewer	Ah, okay. I'm guessing that must be quite troubling for you?	

	23	Participant	Yep…it is.	
	24	Interviewer	Mmm..You also said it makes you feel happy as well?	
A sense of hope and optimism that leaders are coming together	25 26	Participant	Yep cause they're all coming together and trying to sort peace and trying to sort out the climate as well.	Feels 'happy' that they're 'coming together' – perhaps a feeling of relief? Optimism. The use of the world 'peace' is interesting – perhaps relating climate change to other threats like war.
	27	Interviewer	Okay…what's it like for you then to know they're coming together?	
A hesitant sense of optimism	28 29 30	Participant	It feels just normal because they do do meetings but at the same time it's a bit err really good because they they can sort out the climate a bit more as well.	'Normal' but also 'really good' – positivity but perhaps there's a sense of not wanting to be too optimistic/a feeling of pragmatism – sounds hesitant. Positivity is restrained/tentative. A sense of hesitant optimism or possibly cautious hope.
	31 32	Interviewer	Mmm…and what's that like for you to know that they're trying to sort out the climate?	
An appreciation of the environment and longing for it to stay 'as it is'	33 34	Participant	Really happy because I like the environment as it is and I don't want it to change as much, like impact it.	A longing for the environment to stay 'as it is'. Seems to suggest an appreciation and insinuate a fragility of the environment. Possibly anticipating future losses?

Appendix 14: Searching for connections across experiential statements



Appendix 15: Except of Jake's Personal Experiential Themes (PETs)

Themes	Line	Quotes/key words
PET C. A TENDER APPRECIATION OF NATURE, TREASURING PLACES WHERE 'YOU CAN STILL SEE NATURE FLOURISH' *(Experiential statements)*		
A feeling of gratitude and appreciation of 'what nature can be like'.	Lines 299-301	"It makes me feel glad they've left space for the younger generation and to see what…what nature can be like if..if we let it be and help..help it to regain itself."
A sense of noticing and cherishing the absence of human interference in nature.	Lines 85-90	"It is seen as a city but it didn't make the pass for it yet still left place for nature. It's left more space than cities. Like (when) you're going from town to town you often see large patches of grass and farming ground undisturbed and..and it's the same with like villages like Leaferton that's got a few farmers' fields around it, and they've been undisturbed"
	Lines 290-291	"Where I went, there's a huge field and a path you can go along erm it shows erm how they've thought not to build there".
A sense of the preciousness of untouched nature.	Lines 97-98	"It means like we've left nature to flourish and have its place without destroying it all."
	Lines 108-109	"It makes me feel happy that we're still leaving place for nature to flourish and let it be without disturbing it"

	Lines 114-115	“Around Mapletown there are lots of housing estates and you can still see nature flourish and let it take its place in the world”
A sense of disappointment that nature is not always valued.	Lines 36-39	“They..they want people to come in, come and see the country, see what it’s like for their cities but not for the natural beauty. They want them to come for the shops and see larger places”.

PET D. A GLIMMER OF HOPE – ‘IT MEANS WE’VE GOT A CHANCE’

(Experiential statements)

Not all hope is lost, there is still a chance.	Lines 311-313	“It means we’ve got a chance to come back from the actions of what we have caused, of the land masses we’ve destroyed and bring back the nature that was there.”
A sense of optimism and possibility; overcoming adversity ‘is the definition of hope’.	Lines 319-324	“You can see the effects over the course of history with like the great fire of London that causing such a large area to be burned and the sewage systems in London in the past being filling the River Thames up with horrible gunk and rubbish. It makes..it is the definition of hope – like we’ve recovered from that. We’ve..we’ve pushed through the struggle and recovered”
	Lines 328-330	“they can push through adversity as well like they’ve..there’s been so much destruction yet they’ve pushed through and come back stronger.”
Hope is fleeting: a sense of hope being shrouded by insecurity.	Lines 305-308	“It makes me feel hopeful that they'll take responsibility of helping like it’ll not just be left to us. Yeah their kids and kids after that they'll *help* bring it back. Linking back, they might not, it’s all unpredictable. They think they can predict what can come yet you really can't.”

Appendix 16: Excerpt of Aaron Nicholas's Personal Experiential Themes (PETs)

Themes	Line	Quotes/key words
PET A. GUILT, SHAME AND REGRET, A FEELING THAT 'WE COULD'VE DONE A LOT MORE'		
(Experiential statements)		
A sense of regret and remorse that more has not been done.	Lines 45-47	"It's anxiety and anger that it's…we could've done a lot more stuff to help what's going off now. (Inaudible) Like people wasting money on stuff that they don't need when it could be going to the environment."
A sense of personal guilt following the realisation of his actions.	Lines 243-247	"I've recently gone on flights and it was a pretty long journey and I came back from it and I researched it and stuff for the Jamboard. That cropped up so I thought yeahhhh I've been a person whose done that. So yeah that made me pretty guilty so I thought I'd put it down because it's it is something that is really really bad, worse than cars."
A sense of species guilt that humans' decisions are impacting on animals.	Lines 162-165	"I think animals are probably affected the worst because they don't..they can't really do a lot about what's going off. It's our choices that we make and we're making the wrong choices for the environment."
A sense of shame relating to humanity's lack of action despite supposed superiority.	Lines 218-222	"It's more like guilt that people aren't doing anything and guilt that we haven't done anything when we're supposed to be the superior race, when we're not. We should all be equal, and I think people are completely disregarding animals, completely. It's like animals are in the background, people are killing animals just for the fun."
A sense of collective guilt.	Lines 352-353	"We're destroying our earth which means that we're making everything worse for ourselves".

Appendix 17: Excerpt of Redbull-Bob's Personal Experiential Themes (PETs)

Themes	Line	Quotes/key words
PET A. A QUIET DETERMINATION AND SENSE OF POSSIBILITY THAT 'IF THE WORLD LEADERS ARE CHANGING IT, THEN WE CAN HELP AS WELL'		
(Experiential statements)		
A sense of hope and optimism that leaders are coming together.	Lines 25-26	"They're all coming together and trying to sort peace and trying to sort out the climate as well".
	Lines 5-6	"It's all the world leaders coming together as one and trying to sort out the world and make it a better place".
A hesitant sense of optimism.	Lines 28-30	"It feels just normal because they do do meetings but at the same time it's a bit err really good because they they can sort out the climate a bit more as well."
A sense of being galvanised, eager to make positive change.	Line 137	"What does that make you think about?" "Just how to improve the world."
	Line 149	"It makes me feel that I I can push myself even more than I already am."
A sense of a quiet, yet unwavering determination to make positive change.	Line 154	"I just know if I can or if I can't and I just try and try again."
A sense of responsibility, solidarity, and empowerment to make positive change.	Lines 105-106	"The fate is in our hands and we can better the environment or we can just kill it."
	Lines 12-13	"I just thought, if the world leaders are changing it, then we can help as well".

Appendix 18: Searching for Connections across Personal Experiential Themes

PETs were printed and cut out so this could be done physically.

A SENSE OF INSECURITY ABOUT THE FUTURE, A FEAR THAT IT WILL BE 'LIKE AN APOCALYPSE' (AN)	A QUIET DETERMINATION AND SENSE OF POSSIBILITY THAT 'IF THE WORLD LEADERS ARE CHANGING IT, THEN WE CAN HELP AS WELL' (RB)	GUILT, BETRAYAL AND A DEEP FEELING OF RESPONSIBILITY TO THE EARTH – 'THE PLANET IS A GIFT BUT WE'RE THE BURDEN' (J)
A SENSE OF DOUBT, DISTRUST AND SEPARATION FROM OTHERS AS 'THEY DON'T REALISE' (RB)	A GLIMMER OF HOPE – 'IT MEANS WE'VE GOT A CHANCE' (J)	A SENSE OF LOSS - 'IT JUST COMPLETELY DESTROYED PEOPLE AND ANIMALS' (AN)
HOPLESSNESS AND A SENSE OF RESIGNATION THAT WHEN CHANGE HAPPENS 'BY THEN IT'LL BE TOO LATE' (AN)	A SENSE OF URGENCY AND ACHING FOR ACTION, FRUSTRATION THAT 'THEY SHOULD BE DOING A LOT MORE' (AN)	A SENSE OF THREAT, POWERLESSNESS AND INJUSTICE – 'THEY'RE NOT THINKING ABOUT THEIR ACTIONS' (J)
A SENSE OF AWE AND THE PRECIOUSNESS OF EARTH - 'PEOPLE DON'T SEE WHAT EARTH COULD BE' (AN)	A FEELING OF POWERLESSNESS, THAT IT IS OUT OF HIS HANDS 'WE CAN'T DO OWT ABOUT THAT' (RB)	GUILT, SHAME AND REGRET, A FEELING THAT 'WE COULD'VE DONE A LOT MORE' (AN)
A SENSE OF DOUBT AND DISTRUST, QUESTIONING 'WHAT'S THE TRUTH?' (AN)	A SENSE OF DISMAY AND A GROWING RESENTMENT TOWARDS OTHERS - 'ALL THE EVIDENCE IS THERE, AND PEOPLE AREN'T TAKING ANY NOTICE OF IT'. (AN)	A SENSE OF LOSS AND GRIEF IN RELATION TO THE ENVIRONMENT – 'WE'RE DESTROYING WHAT WE'RE LIVING ON' (J)
A TENDER APPRECIATION OF NATURE, TREASURING PLACES WHERE 'YOU CAN STILL SEE NATURE FLOURISH' (J)	A SENSE OF INSECURITY, A FEELING OF BEING AT A CROSSROADS 'ON ONE HAND WE COULD BE ALIVE AND ON THE OTHER WE COULDN'T' (RB)	A SENSE OF NATURE FEELING FRAGILE AND PRECIOUS 'IT'S GONNA IMPACT THEM AS MUCH AS IT IS GONNA IMPACT US' (RB)
	A FEELING OF TEETERING ON THE BRINK, A FEAR OF 'WHAT WILL BECOME OF OUR FUTURES?' (J)	

Appendix 19: Cross-Case Analysis – Table of Group Experiential Themes

Table of GETs and subthemes following analysis of individual interviews (complete version)

GET A. A SENSE OF PRECIOUSNESS AND BEING IN AWE OF EARTH - 'IT'S A SIGN OF HOW BEAUTIFUL OUR WORLD IS'

Subtheme – Appreciating and cherishing nature

A sense of disappointment that nature is not always valued.

"They..they want people to come in, come and see the country, see what it's like for their cities but not for the natural beauty. They want them to come for the shops and see larger places". (Jake, lines 36-39)

A sense of noticing and cherishing the absence of human interference in nature.

"It is seen as a city but it didn't make the pass for it yet still left place for nature. It's left more space than cities. Like (when) you're going from town to town you often see large patches of grass and farming ground undisturbed and..and it's the same with like villages like XXX that's got a few farmers' fields around it, and they've been undisturbed" (Jake, lines 85-90)

"*Where I went, there's a huge field and a path you can go along erm it shows erm how they've thought not to build there".* (Jake, lines 290-291)

A sense of the preciousness of untouched nature

"It means like we've left nature to flourish and have its place without destroying it all." (Jake, lines 97-98)

"It makes me feel happy that we're still leaving place for nature to flourish and let it be without disturbing it" (Jake, lines 108-109)

"Around Mapletown there are lots of housing estates and you can still see nature flourish and let it take its place in the world" (Jake, lines 114-115)

A feeling of gratitude and appreciation of 'what nature can be like'

"It makes me feel glad they've left space for the younger generation and to see what…what nature can be like if..if we let it be and help..help it to regain itself." (Jake, lines 299-301)

An appreciation of the environment and longing for it to stay 'as it is'

"I like the environment as it is and I don't want it to change as much, like impact it." (Redbull-Bob, lines 33-34)

A sense of awe and wonder at Earth's potential

"People don't see what earth could be." (Aaron Nicholas, lines 380-381)

"*It's it's like paradise basically. Because they haven't got..it isn't…there's not that much advertising, there's not that much emissions that's going off there*". (Aaron Nicholas, lines 371-373)

A sense of awe and wonder at Earth's beauty

"*It's a sign of how beautiful our world is and how much what's going off there all the thing that's bad for the environment and what we've still got. We've still got a beautiful earth. There's parts of it that's completely..nearly destroyed like the ice caps but if we stop all the carbon and all of that then it means that we've still got an earth to live on. And we've still got an earth to cherish..cherish basically*." (Aaron Nicholas, lines 341-347)

Subtheme – Nature feels precious and fragile

A sense of the preciousness and vital importance of nature

"*There's a lot of devastation in the amazon basically for that reason. And basically amazon's our lungs for earth*." (Aaron Nicholas, lines 270-271)

A sense of the preciousness and fragility of Earth.

"*Animals are probably...they basically are earth and if we destroy animals it'll destroy earth. And all the ecosystems will shatter including the human race*." (Aaron Nicholas, lines 224-226)

"*There is no next earth. Like what Greta's Thunberg's been protesting about so yeah*." (Aaron Nicholas, lines 349-350)

Anticipated losses accentuate the sense of the preciousness of nature.

"*Like if the climate change continues it'll impact the environment a lot more and it will hurt not just all the trees and us but other animals as well."* (Redbull-Bob, lines 36-38)

"*It makes me really upset because if there's no trees around and then we die off then also some animals will also die off*." (Redbull-Bob, lines 42-43)

The specialness of Redbull-Bob's relationship with his pets

"*I was thinking about my pet animals. I have a cat and a dog and if it hurts them it's going to impact th-them and their health as well as everyone else's*." (Redbull-Bob, lines 160-162)

"*I just know that it's gonna impact them as much as it is gonna impact us*." (Redbull-Bob, lines 173-174)

GET B. A SENSE OF LOSS AND GRIEF – 'WE'RE DESTROYING WHAT WE'RE LIVING ON'

Subtheme – A feeling that something has been lost

A feeling that something has gone forever

"They've destroyed such..one big part of landmass, disturbing nature maybe and animal…species of animals certain to that location." (Jake, lines 8-9)

Despair and exasperation; the destruction of nature seems senseless

"It's made me feel – why do it? Like why tear down pieces of land to be covered by concrete when you can leave nature in its place and let it be but still have places to go around." (Jake, lines 28-30)

Distress and anguish in relation to current losses

"We're destroying what we're living on." (Jake, lines 54-55)

A sense of loss from permanent damage

"It's been ravaged by warfare and emissions." (Aaron Nicholas, lines 393-394)

Subtheme – A sense of anticipated loss

A sense of anticipated loss; further destruction feels inevitable

"They've cramped largest cities, you will often see them be larger. Yes, for a rising population but soon they will have to build..build on that and it might make that city expand more, destroying more things". (Jake, lines 43-46)

A sense of loss and anticipated loss

"*Basically the airs getting destroyed, emits more carbon which means the more global warming, more earth destruction basically."* (Aaron Nicholas, lines 273-274)

GET C. A SENSE OF GUILT, BETRAYAL AND REMORSE - 'THE PLANET IS A GIFT BUT WE'RE THE BURDEN'

Subtheme – A sense of species guilt

A sense of regret and remorse that more has not been done

"*It's anxiety and anger that it's…we could've done a lot more stuff to help what's going off now. (Inaudible) Like people wasting money on stuff that they don't need when it could be going to the environment."* (Aaron Nicholas, lines 45-47)

A sense of species guilt that humans' decisions are impacting on animals

"I think animals are probably affected the worst because they don't..they can't really do a lot about what's going off. It's our choices that we make and we're making the wrong choices for the environment." (Aaron Nicholas, lines 162-165)

A sense of collective guilt

"*We're destroying our earth which means that we're making everything worse for ourselves*". (Aaron Nicholas, lines 352-353)

A sense of shame relating to humanity's lack of action despite supposed superiority

"*It's more like guilt that people aren't doing anything and guilt that we haven't done anything when we're supposed to be the superior race, when we're not. We should all be equal, and I think people are completely disregarding animals, completely. It's like animals are in the background, people are killing animals just for the fun."* (Aaron Nicholas, lines 218-222)

A sense of personal guilt following the realisation of his actions

"I've recently gone on flights and it was a pretty long journey and I came back from it and I researched it and stuff for the Jamboard. That cropped up so I thought yeahhhh I've been a person whose done that. So yeah that made me pretty guilty so I thought I'd put it down because it's it is something that is really really bad, worse than cars." (Aaron Nicholas, lines 243-247)

A sense of species guilt and betrayal

"We're using the planet to our own advantage yet we're not caring for it back." (Jake, lines 58-59)

A sense of anticipated guilt and regret

"*Like what could happen to animals as well like? If…what will we do like will..will we have the decision to put them in cages and not let them run free?"* (Jake, lines 212-214)

A sense of the preciousness of the planet contrasted with species guilt and betrayal

"*The planet is a gift but we're the burden that's holding it back. What can we do in the future to help it?"* (Jake, lines 266-267)

"Over thousands of years we've grown on this planet and evolved and...and now we're destroying it but we've done that ourselves. The planet has given us the gift of evolving and life but we're putting on it death and destruction, of everything to be honest, like with ice caps melting and all that like." (Jake, lines 257-261)

Subtheme – Jake's sense of righteousness

A sense of righteousness and morality; a profound feeling of duty to something bigger than ourselves

"*It's not just thinking about ourselves it's thinking about nature like natures of every..everywhere. Tectonic activities, yeah, that is nature like releasing stress you could say."* (Jake, lines 242-245)

"*it's something we've got to look after. We've not just got to look after ourselves yet we've got to look after what's around us. It's not a burden but it's a gift…what we've been given*." (Jake, lines 247-249)

A sense of collective responsibility to repair the damage to the planet

"If we cause it any harm we should find a way to return the favour to help regrow the damage we've done." (Jake, lines 68-69)

"They've got they've got their jobs..jobs to do to help recover." (Jake, line 251)

GET D. A SENSE OF STANDING ON THE PRECIPICE: FEAR AND INSECURITY OF 'WHAT WILL BECOME OF OUR FUTURES'

Chronic uncertainty and futurelessness; the possibility of an unalterable fate

"Have you heard about the about the doomsday clock? Er..it's a clock numerous scientists made to predict when the world will end and it's been at its lowest ever recorded in history. I can't..I can't remember when the last (inaudible) recorded but it's been I think it's been at 0.9 and that's the lowest it's been throughout recorded history." (Jake, lines 158-163)

Chronic uncertainty, insecurity, and a fear of what the future may hold

"It feels confusing 'cause I'm still young and it..if younger people know what's going on in the world it makes us worry what will become of our futures, what will we have to do.." (Jake, lines 264-266)

"*I think it was in Manchester with the mini tornado it's..it's kind of worrying now that we've never really had such high winds and it's worrying what could happen to places that aren't..that aren't so bad for natural disasters in the future. Like could..could we end up getting things like tsunami's, earthquakes? What could happen to us in the future?"* (Jake, lines 238-242)

Apprehension about the future of the planet; the situation feels precarious

"It's either gonna to be a choice of building higher or destroying more of nature for the population to live. Like we're already an 8 billion population and it's steadily rising and kind of worrying." (Jake, lines 209-212)

A sense of urgency to make change or else 'what could happen to us'?

"With the way it's going, there's been predictions about certain animals going extinct in 2050, 2030 and all that. It makes you think that if..if something's happening to animals that used to have such a high population, what could happen to us over the years? We don't need to just focus on land/stupid reasons…we need to focus on people and the environment and what it's doing to the planet and the…and what the results could be like…yeah." (Jake, lines 170-176)

A feeling of uncertainty towards the future

"*So, the earth is getting hotter, everyone knows that. It's it's kind of worrying what's could happen*." Aaron Nicholas, lines 8-9)

A sense of insecurity and fear related to environmental and human threats

"*Destroyed means that earth will completely self-destruct. Basically means the sea levels'll rise because of glaciers melting and people with warfare that'll destroy the world it will kill millions of people and it'll kill millions of animals. And at the rate of it, volcanic eruptions like in Iceland is coming quite a lot. Like an apocalypse basically."* (Aaron Nicholas, lines 208-212)

A sense of the future being difficult

"*Because it's it's a perfect example of what's gonna happen weather wise if we don't sort it out*." (Redbull-Bob, lines 84-85)

A feeling of insecurity and uncertainty; a sense that two distinct possible futures lay on the horizon

"It's really good on the one side of the world because they've been keeping really organised and stuff like that and on the other side of the world it's like there's barely any life left and it's basically showing about how the climate can affect us in about 150 years time and stuff." (Redbull-Bob, lines 78-82)

"*Cause on one hand we could be alive and on the other we couldn't*". (Redbull-Bob, line 97)

"*On one hand it's gonna be nice, on the other it isn't*". (Redbull-Bob, lines 99-100)

GET E. A FLICKER OF HOPE, A SENSE OF POSSIBILITY THAT 'FATE IS IN OUR HANDS'

Subtheme - A sense of empowerment; positive change is within our grasp

A feeling of empowerment: taking ownership and giving back to nature

"*Often gardens are small in areas like these..like these on housing estate. Yet people have made small places into places where they enjoy, yet still look after it like. It's their own thing, they want to make it proud like. And they're returning the favour bit by bit."* (Jake, lines 116-119)

A sense of being galvanised, eager to make positive change.

"*It makes me feel that I I can push myself even more than I already am."* (Redbull-Bob, line 149)
("What does that make you think about?") "Just how to improve the world." (Redbull-Bob, line 137)

A sense of responsibility, solidarity, and empowerment to make positive change.
"*The fate is in our hands and we can better the environment or we can just kill it."* (Redbull-Bob, lines 105-106)
"*I just thought, if the world leaders are changing it, then we can help as well".* (Redbull-Bob, lines 12-13)

A sense of a quiet, yet unwavering determination to make positive change.
"I just know if I can or if I can't and I just try and try again." (Redbull-Bob, line 154)

A tension between feeling empowered to make positive change alongside doubt.
"*That we could do it, we can change the environment. But on the other..some people don't want to change it. So yeah."* (Redbull-Bob, lines 113-114)
"*Good because we could change it, or we could destroy it. And it isn't just...it's not just all uhh just us in this school it could be everyone in the world as well."* (Redbull-Bob, lines 108-110)

A sense of meaning in thinking about ways to help the environment.
"*I like thinking about stuff that could help the environment so like stuff that could change cars and stuff like that."* (Aaron Nicholas, lines 401-403)

Subtheme – A fragile hope
Not all hope is lost, there is still a chance
"It means we've got a chance to come back from the actions of what we have caused, of the land masses we've destroyed and bring back the nature that was there." (Jake, lines 311-313)

A sense of optimism and possibility; overcoming adversity 'is the definition of hope'.

"*You can see the effects over the course of history with like the great fire of London that causing such a large area to be burned and the sewage systems in London in the past being filling the River Thames up with horrible gunk and rubbish. It makes…it is the definition of hope – like we've recovered from that. We've…we've pushed through the struggle and recovered*". (Jake, lines 319-324)

"*They can push through adversity as well like they've…there's been so much destruction yet they've pushed through and come back stronger."* (Jake, lines 328-330)

Hope is fleeting: a sense of hope being shrouded by insecurity

"It makes me feel hopeful that they'll take responsibility of helping like it'll not just be left to us. Yeah their kids and kids after that they'll help bring it back. Linking back, they might not, it's all unpredictable. They think they can predict what can come yet you really can't." (Jake, lines 305-308)

A sense of hope and optimism that leaders are coming together.

"*It's all the world leaders coming together as one and trying to sort out the world and make it a better place".* (Redbull-Bob, lines 5-6)

"*They're all coming together and trying to sort peace and trying to sort out the climate as well".* (Redbull-Bob, lines 25-26)

A hesitant sense of optimism

"It feels just normal because they do do meetings but at the same time it's a bit err really good because they, they can sort out the climate a bit more as well." (Redbull-Bob, lines 28-30)

Optimism is fleeting and eclipsed by concern that not enough is being done

"I went with Jet2 and they do quite a lot which is very very very very very good but you don't really see a lot of other planes companies doing that which is not a very good sign. Yeah I mean cars yeah a lot of people are doing stuff about that like people trying to make electric cars and stuff like

that. (Inaudible) I mean don't get me wrong, they're good but they're way too expensive, that's why people are buying diesel and petrol still." (Aaron Nicholas, lines 262-268)

"It feels pretty good that they're doing stuff about it. But it's just the way they're marketing the stuff that aren't..you don't see Tesla marketing theirs. Hyundai yes but they're marketing petrol cars still which isn't good. I think they should the price of cars that're electric should be a lot cheaper than it is and for electricity to be a lot cheaper." (Aaron Nicholas, lines 279-283)

"And don't get me wrong there's a lot of people who're doing stuff for it to help, but there's..it's probably only about 40% of the population that's doing anything about it. There's supposed to be a lot more other people helping take action." (Aaron Nicholas, lines 134-137)

Feeling inspired alongside a longing for more action.

"*Greta Thunberg I think she's the only person I can think of who has made like a massive impact. And she's done a lot. I think there should be more a lot more people like that."* (Aaron Nicholas, lines 416-418)

An urgent feeling that more could be being done.

"*With technology as it is I don't see why we couldn't we can't do anything else. I mean we've got computers that can do a lot of stuff that we could do for. And yeah, it's not really that much of an excuse there still being pollution as such."* (Aaron Nicholas, lines 53-56)

"I know that quite a lot of plane companies like Boeing and Airbus they're making stuff that's more fuel efficient but it's still not enough. It needs to be..I mean it should be at least electric by now. Because we've got the technology for it it's just about people all the luxury and stuff that we don't really need." (Aaron Nicholas, lines 237-241)

Desperate longing for action contrasted with disappointment.

"*You really really really really want to see action and you're not getting it. It's not it's not cracking*." (Aaron Nicholas, lines 121-122)

Anger fuelling a sense of invigoration

"*It's like anger and annoyance and wanting to do something that will help yeah*." (Aaron Nicholas, lines 204-205)

GET F. A SENSE OF THREAT: CLIMATE CHANGE TAPS INTO OTHER FORMS OF DESTRUCTION

A sense of threat, irresponsibility, and injustice.

"Say…say with the wars, it's de-homing people, it's causing people to leave their homes but it's also destroying such large amounts of land. It's just causing mass destruction." (Jake, lines 70-72)

"Erm they're destroying land, not just de-homing people, but harming the environment. It's..it's careless actions that they've not thought through and not found a way to resolve because these two places they've..they've been at war for hundreds of years and haven't found a way to resolve it. It's..it's all for a stupid reason for greed like. They want..I think Israel it's those attacking and they wanting more land. Erm..and it's kind of the same with Russia and Ukraine. They're kind of wanting Ukraine back from like the Soviet Union because they..they had such a large landmass and it was taken away from them and now they've decided we want to attack and take it back with careless actions harming people and the environment." (Jake, lines 132-142)

"Erm…countries that are fighting right now like Israel and Palestine, what's been going off in Iran and Afghanistan with the Taliban, and it wasn't very brought up, but Yemen with the bombing the boats I think it was, like putting in all waste into the sea. Yet recently erm er oil, oil rigs er one was attacked and lots of oil was well destroyed, and it was worth a lot" (Jake, lines 76-80)

Distress in relation to past and ongoing destruction

"It just completely destroyed people and animals basically. But some animals are okay, but they mutate and it's not..it's not a good sign. But with the Japanese nuclear thing that went off it's killing a lot of stuff, and it still is." (Aaron Nicholas, lines 177-180)

A sense of threat and fear for the future.

"So with nuclear waste that's pretty bad. I mean most of its steam but like I said earlier nuclear bombs when things go wrong it could be devastating. It means that basically that erm cities and stuff like that could be destroyed." (Aaron Nicholas, lines 298-301)
"Basically what happened in Japan and Ukraine like Chernobyl and the Fukushima disaster. You see people saying that nuclear reactors are good for the environment but when it goes bad then what's the point of making them. When you look at the long-term side effects like I heard that Ukraine, Pripyat is going to be uninhabitable for like at least a thousand years because of one single thing that went wrong." (Aaron Nicholas, lines 306-312)

A sense of powerlessness and helplessness; the future feels uncertain
"Like it's worrying what future generations will do to our planet – will they find a way to start peace between countries or make this current situation even worse?" (Jake, lines 214-216)

A sense of political distress and confusion over senseless actions.
"*I'm feeling confused about why they're doing it, like, if you want land you should find a way to make an alliance and join together and not just come in guns n'all, dance ready, bombing places and that. 'Cause it's completely unreasonable and it's not doing anybody good at all*." (Jake, lines 191-194)

A sense of dismay that no one is taking this seriously enough.
"*It puts a negative feeling on everyone but everyone just shoves it away like…'Oh it's not our country, we shouldn't be worried'. Yet they're careless enough to think…if other countries get involved, we'll get involved with them and start attacking them, and people haven't thought of that like*." (Jake, lines 153-156)

Irritation and exasperation over irresponsible actions; 'they know what they're doing'.
"*It doesn't make me feel joyous or anything at all..it makes me feel quite the opposite because they..they know what they're doing and they're taking responsibility for their actions and even though they've had sanctions put on them and with other countries coming in to support, they're still not stopping on what could have stopped ages ago".* (Jake, lines 144-149)

A sense of futility and loathing; their actions are senseless.

"*I kind of think it's stupid on what they're doing for numerous reasons about greed and some places they just do it for no reason like. And some countries they'll escalate it to a point where it didn't need to go*." (Jake, lines 178-181)

A sense of threat and insecurity about the future

"'Cause it could end all life if it gets to a certain point. Like knowledge of what people have invented – the mass destruction weapons that could go off like…they're unpredictable." (Jake, lines 184-186)

A sense of panic and anguish about the possibility of irreversible damage

"I think Russia at one point threatened saying that we have a bomb that could wipe out the UK. If that happened, then that would be such a huge responsibility. It *would* end up in such a massive war. It might end up doing permanent damage". (Jake, lines 278-281)

Chronic uncertainty and futurelessness; the possibility of an unalterable fate

"Yeah like if..if this doesn't stop the war and conflict and they don't help rejuvenate what they've done it will end up in total extinction maybe..who knows?" (Jake, lines 166-168)

A sense of threat and fear for the future

"*Well when I felt anxious it's because of err if the world leaders do sort it, it might turn into a even like worser war should I say than it already is. Because err if they're trying to make it more better and then they make eco weapons that are more deadly and silent then it could cause a world war*". (Redbull-Bob, lines 17-21)

GET G. A SENSE OF THE OTHER AS AN ADVERSARY – 'THEY SHOULD BE DOING A LOT MORE'

Subtheme – Disappointment, frustration, and incredulity

Feeling disappointed and disenchanted with his generation.

"*…we're supposed to be the generation that goes into the future and helps people be better and we're not doing it."* (Aaron Nicholas, lines 78-80)

"*And young people aren't doing anything to help or like to push more people to doing like better stuff if you know what I mean. Erm I mean I can kind of understand that I do. A lot of young people are not taking any notice. Like people I've seen people chuck MacDonalds out of car windows when they're driving. Erm I've seen people setting fire to stuff. And it's not..it's not good*." (Aaron Nicholas, lines 68-73)

"It's pretty concerning because we're supposed to be a generation of people who care for stuff." (Aaron Nicholas, lines 52-53)

Feeling disheartened and disappointed in the lack of action of others.

"*It's just really disrespectful that people aren't doing anything as such for the environment*." (Aaron Nicholas, lines 98-99)

"It's just like...adults are supposed to be the people doing the most as such, but I mean even like young people should be doing stuff to help and they're not." (Aaron Nicholas, lines 124-126)

A sense of dismay and resentment towards the older generation.

"*Now adults aren't doing anything about it as such so I don't see how the younger generation is gonna help when the adults aren't doing anything, and adults are supposed to be example to children which they aren't doing."* (Aaron Nicholas, lines 425-428)

A sense of bewilderment and exasperation; the actions of others seem senseless.

"*It's just like why (do) people want to destroy it? I mean some people don't even think about what their actions could be if they do something that's bad for the environment*." (Aaron Nicholas, lines 378-381)

A sense of frustration and exasperation directed towards others.

"*It's it's very very tricky to understand how people's minds work when it comes to that stuff. People know..they've been educated about it, now if people aren't taking any action against..about it."* (Aaron Nicholas, lines 132-134)

"I just question why they're doing it because there's not that much point of doing it. But it's..it's not like people haven't been educated to not doing it". (Aaron Nicholas, lines 76-78)

"*The thing that we don't get about why people aren't taking any action is when they've been educated that it's wrong and still don't take any notice of it*." (Aaron Nicholas, lines 201-203)

"It's..anger really. That's the only thing I really think about. It's just it's anger and annoyance why they've they've got to have been taught not to do stuff like that when they know what the consequences will be. I mean there'll probably always be people like that. But it's..people are putting bins everywhere that promote chucking stuff in the bin but there's still people just deciding to chuck it on the floor and just not thinking about what the consequences could be into the future." (Aaron Nicholas, lines 146-152)

"*Well some people will take notice of that they'll do stuff to prevent it but the amount of people driving petrol cars that're really really expensive is a lot and there's hardly any people driving electric cars*." (Aaron Nicholas, lines 103-105)

"*A lot of people are still driving diesel cars and stuff and they know it's bad for the environment and they're not doing anything about it*." (Aaron Nicholas, lines 109-111)

"*All the evidence is there, and people aren't taking any notice of it. I mean don't get me wrong there's a lot of people doing stuff but it's not… People do stuff that they know is bad for the environment and like chucking litter and stuff like that into the trees*." (Aaron Nicholas, lines 36-39)

A sense of dismay in relation to the choices people are making.

"*It's like scientists they're pushing for electric cars and stuff like that that should be going off now. Erm but it's like a lot of people are picking the worst choices for the environment. So they'll pick luxury stuff that's is completely, well just really really bad for the environment*." (Aaron Nicholas, lines 64-68)

A sense of disappointment in relation to a wasteful society

"*You take fast fashion and stuff like that people just chuck away for the next fashion that goes off. It's it's a waste of valuable time but also in oil. And basically, it's destroying the world. And I think phones as well because all the battery and stuff like that that's impacting a lot and also phones are..I think iPhones are on the right track. They're making phones last longer, but they break a lot which means bad for the environment basically."* (Aaron Nicholas, lines 451-457)

Frustration and agitation over lack of perceived action

"*I don't see why people aren't really standing up. I mean Greta Thunberg she's standing up which is very very very very very very good but there's..you don't see green rallies or anything like that that's going off. I mean there'll be NHS – I understand that, completely understand that, but there's needs more action really. I mean stopping war as well that is something that will help the environment in the long run*." (Aaron Nicholas, lines 90-95)

A sense of exasperation and frustration related to political inaction

"*It's more anger than anything else. It's just like whys the government not doing anything as such and they're pushing back stuff to…Let's say electric cars, they're trying to make a ban on diesel and petrol cars now they've it was supposed to be 2030, they've pushed it back to 2035*". (Aaron Nicholas, lines 9-13)

"They're not doing anything..what they should have done a long time ago." (Aaron Nicholas, line 24)

Feeling doubtful of other's willingness to engage in action.

"*Just trying to improve the standard of living but don't think it will ever happen cause other people experience it more than us."* (Redbull-Bob, lines 259-260)

A sense of despairing disbelief in other's lack of awareness.

"I have been asking people what they think they're like 'what is it'. They don't even know." (Redbull-Bob, lines 176-177)

Brewing resentment about the decisions being made.

"*Like motorways, you often see them about in three lanes wide, one maybe bigger. And it's just such large things like just dug it up filled it with concrete and if they'd of, they could have kept an eye on whether it's affecting the road's nature, without having to place down all this concrete. Yeah, I get it, it's for stabilisation, but if they didn't place all these barriers down they could keep an eye on nature and keep it from affecting drivers on the road*." (Jake, lines 46-52)

Feeling conflicted: decisions can be rationalised but opportunities to protect nature have been missed.

"*I find it quite reasonable because they want to keep a steady eye on people what's going off in the city. Yeah, using such a big area they could have split into smaller parts of the city and spread it out more so that you can see nature a lot more through it. 'Cause you don't…you can see small bits but it's not often large chunks you see..is it?"* (Jake, lines 20-24)

A sense of realisation at the absurdity of urbanisation.

"*It's like in Leeds you'll often see large buildings all around. One of my relatives errr she went to a college, and it was like it was 25 storeys tall. Yeah it's ridiculous, when you come to think about it."* (Jake, lines 13-15)

Subtheme – A sense of suspicion and distrust

A sense of scepticism and distrust in the government.

"*It's like they say they're going to do something better but they never do it."* (Redbull-Bob, lines 219-220)

A sense of confusion and loss of trust in the government.

"*What's..what's the truth? It's like people are being misguided. Like people in the government are just misguiding the population*." (Aaron Nicholas, lines 448-449)

A sense of doubt and loss of trust due to misleading information.

"*I think people have been misguided, like really misguided. It's like I read up online there was this thing that people are claiming money because of emissions and stuff like that from diesel cars and people who make the cars are basically lying about the emissions and the emissions are a lot worse than they were wrote down to be. So people are buying the cars when they're being misguided and people might've not well thought about it or they might've not known what it could've effected basically*." (Aaron Nicholas, lines 251-258)

Subtheme – A sense of injustice

A sense of injustice that climate change is not prioritised.

"It's not really widely spoken as. I mean its spoken about wars and stuff like that, I understand that, but they should be doing a lot more for the climate change." (Aaron Nicholas, lines 28-31)

A sense of frustration and injustice.

"…*they more care about finding places to live and natural resources, like, erm crude oil, rubber and all that*." (Jake, lines 61-63)

A feeling of cynicism towards those in power; they're motivated by their own self-interests.

"*It's just a way of saying well 'if we do this we don't care' um 'we're just we're protecting ourselves' that's all they want. Either they're doing it for self-protection or it's for greed."* (Jake, lines 272-275)

A sense of bewilderment over perceived contradictory messages.

"*It's just really conflicting cause if we're trying to help the environment, don't create electric cars just shut down the factories for making the cars cause there's plenty..in a sense. There's plenty cars..of cars in the world so we don't need anymore*." (Redbull-Bob, lines 70-74)

Subtheme – A feeling of powerlessness

A sense of powerlessness, that other's decisions aren't within his control

"*People have their own opinions in a way, and it isn't my decision to tell them what's right and what's wrong*". (Redbull-Bob, lines 118-119)

A feeling of disempowerment to effect change.

"*It's the government they rule the country we can't do owt about that until May this year*." (Redbull-Bob, lines 214-215)

A sense of hopelessness and powerlessness to effect change.

"*You have a parent who does things that're wrong for the environment or bad for the environment then you get a child a few years later into an adult to still do it the thing that's wrong and it passes on and passes on and passes on. Until they'll be someone who points out 'no this is wrong, don't do it' but by then it'll be too late*." (Aaron Nicholas, lines 434-438)

A sense of futility and powerlessness in relation to government inaction.

"…Those are made by like people in the government who are supposed to be leaders. If the leaders aren't taking any notice of..of erm the cautions given out by scientists and geographers, then I think what will? It's like I don't think a lot of governments will take any notice until it's worse case scenario." (Aaron Nicholas, lines 185-189)

"*Worse case scenario that they'll probably listen and by then the world will just be destroyed really*." (Aaron Nicholas, lines 200-201)

A sense of disconnection and resignation

"People aren't really doing anything about it, it's it's pretty sad because it's..it's only their futures that it's gonna affect innit so yeah." (Aaron Nicholas, lines 40-42)

A sense of powerlessness to shape future actions; doubt and distrust in humanity

"*We can't control what the future generations do, it's what..they do what they want to do like*." (Jake, lines 218-219)

"*Yeah it feels out of control…like if we could leave like a message for them they still might not follow it. They just..they might just ignore everything we've left for them for the warnings what could happen if they do so and so."* (Jake, lines 221-224)
"*So they've..yes they have learned off past incidents but still others might not have. They might take it to another level*." (Jake, lines 233-235)
"*Can..can we stop this war or will it never stop? Will they just continue on without a care of what anybody else says? Will they let greed take over?"* (Jake, lines 268-269)

Subtheme – Alone in the fight

A feeling that no one is listening.

"*The government isn't listening. People in general aren't listening*." (Aaron Nicholas, lines 412-413)

A sense of despair, a feeling that something is not listening.

"*The government isn't actually paying attention at what's happening and it makes me feel upset. Cause if the government int paying attention what everything else is on. Like we do reading on computers now, we do maths on computers but we have to write it down on paper and I don't get why."* (Redbull-Bob, lines 204-208)

A feeling of isolation, a sense that he is more aware than others.

"*At the moment they're trying to make more cars and electric cars, but they don't realise that if there's more cars then there's more factories working and then them factories are burning more fossil fuels increasing the err warmth of the climate."* (Redbull-Bob, lines 48-51)