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Eco-Anxiety at University: Student Experiences and Academic Perspectives on Cultivating Healthy Emotional Responses to the Climate Crisis

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ISP Ethics Review

(Note: Each AD must complete, sign, and submit this form for every student's ISP.)

The ISP paper by Anna Kelly (student) <u>does</u> conform to the Human Subjects Review approval from the Local Review Board, the ethical standards of the local community, and the ethical and academic standards outlined in the SIT student and faculty handbooks.

Completed by: Peter Brennan

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Abstract

This research looks at the overall question of how planetary health impacts mental health and psychological welling. The central focus is eco-anxiety—mental distress caused by climate change and environmental degradation—and how it manifests in university students. In order to gather data for this research I collected 114 student survey responses, interviewed seven young adults (ages 20-25), and interviewed seven experts in the fields of psychology and environmental studies.

They survey results show high levels of general stress and anxiety, high levels of stress and anxiety related to climate change and the state of the world, and a very high level of importance placed on nature connection in terms of mental health and psychological resilience. Most students also reported feeling that environmental studies classes psychologically prepare them poorly—moderately well for the information they receive.

The young adults and experts interviewed comment on their own experiences with eco-anxiety, the important role media plays in influencing public opinion, their distrust of most mainstream media sources, their perceptions of how climate change is represented in academia (both what's working and what isn't), the psychology of climate denial, the process of empowering young adults, and the importance of both nature and community connection. They also provide recommendations for students, universities, organizations, and psychologists on how to best integrate a greater focus on mental health and wellbeing as we move forward with the fight against climate change.

Keywords: eco-anxiety, mental health, psychological resilience, nature connection, university students

Table of Contents

Acknowledgements

Tables and Figures

1. Introduction

1.1. Planetary and Psychological Health

Climate change is the number one ecological crisis of our time. In an attempt to come to terms with this profoundly distressing truth, we must not only look outwards for guidance, but also within. Although there is a great deal we can learn from scientists, engineers, journalists, and politicians, we also hold great wisdom within ourselves—in the mental, spiritual, and emotional spaces inside of us. Because the climate crisis can be so disturbing, a good starting place for this journey within is an assessment of our emotional selves—specifically the impacts that planetary heath can have on our mental health and personal wellbeing. By taking an honest look at our emotional responses to this time of great upheaval we can begin to heal both our planet and ourselves.

1.1.1. Eco-Anxiety at University

In this paper I'll be looking specifically at eco-anxiety, which is basically mental distress caused by climate change and environmental degradation. My principle study group is university students in Melbourne, Australia. My main study question is: How does planetary health impact mental health? I will be investigating three sub-questions to help narrow my focus on eco-anxiety. These are:

1. How does eco-anxiety manifest itself in university students?
2. How is eco-anxiety being understood and addressed by experts (psychological professionals, lecturers, researchers, etc.) in the fields of psychology and environmental studies?
3. What are the most effective ways to cope with eco-anxiety?

With my work I hope to provide examples of coping mechanisms that will increase both personal and planetary well-being. I am also hoping to shed more light on a topic that is not being written about or discussed nearly enough. This is very cutting-edge work and I feel lucky to be a part of it at such a significant time. People who are experiencing eco-anxiety need to know that they are not alone and that there are healthy ways to cope with it. Psychology professors and psychologists need to be aware of the impact planetary health is having on mental health. Environmental studies professors and environmental organization managers need to be aware of the mental health impacts that constant exposure to information about planetary health can have—and thus the need to make psychological support available. I hope this study will

provide them with some of information they need in order to better incorporate the topic of eco-anxiety into their respective fields.

That said, this topic is not only relevant to psychology. It is also very much intertwined with environmental studies and the concept of sustainability. In my opinion living sustainably means living in way that supports intra-generational and inter-generational equity, respects the natural environment, and encompasses a holistic approach paired with long-term thinking. The Environment Standards Branch of the Commonwealth of Australia explains that a sustainable community would focus on "appropriately valuing, appreciating, and restoring nature, conserving biodiversity and ecological integrity, [and] ensuring no net loss of human or natural capital" (2009). I think some of the biggest obstacles that prevent people from living sustainable lives are the feelings of being overwhelmed, anxious, and even paralyzed by the state of the world. It's often easier to pretend that there isn't a problem. My theory is that if people are better able to cope with eco-anxiety, they will be more willing and able to live sustainable lives. There are many leading psychologists and environmentalists who share this belief. Their views are expressed below.

A lot of the inspiration I have for doing this project comes from my experience in environmental education and the work of David Sobel. Although his writing on ecophobia (which is very similar to the concept of eco-anxiety) is mainly focused on children, I think it can be accurately be applied to people of any age. In his article "Beyond Ecophobia" (which was adapted from his book *Beyond Ecophobia: Reclaiming the Heart in Nature Education*) Sobel explains that, "In response to physical and sexual abuse, children learn distancing techniques, ways to cut themselves off from the pain. . . . The natural world is being abused, and they just don't want to have to deal with it" (1998, para. 6). I think that by taking eco-anxiety seriously and encouraging people to talk with it and cope with it in healthy ways, they will be better prepared to deal with it and better able to address the major environmental problems of our time.

1.1.2. Defining Eco-Anxiety

While the term eco-anxiety was introduced relatively recently, the idea that it is based upon—concern about the environment—is nothing new. In the last couple of decades though, as knowledge about human induced climate change has entered the mainstream, the environmental concern felt by the general public has reached a new level (Cohen, 2014, para. 1). The term eco-anxiety allows us to express the way in which environmental concern is having unprecedented

detrimental impacts on personal wellbeing. This isn't likely to change anytime soon. In their pertinent article "Climate change: The next challenge for public mental health?" Francois Bourque and Ashlee Willox note, "scholars increasingly expect that many adverse outcomes from climate change will be psychological and that mental health impacts from climate change will be widespread, profound, and cumulative" (2014, p.415).

After recognizing the importance of eco-anxiety, I felt disheartened to realize how little it is being discussed or addressed. Although the value of eco-anxiety has been recognized and explained by various independent sources (see Edwards, 2008), the term has not yet found its way into academia. Both the academic and psychological communities have much to gain from a deeper understanding of the root causes, manifestations, and implications of eco-anxiety.

The best definition of eco-anxiety that I have found was written by Dr. Sarah Anne Edwards (PhD, LCSW, ecopsychologist, and author). In her article "Eco-Anxiety: An Intelligent Response" she explains that it is "the psychological response to a constellation of environmental events such as global warming, climate change, resource depletion, species extinction, and ecological degradation" (Edwards, 2008, para. 1). In our response to eco-anxiety she recommends that, "we should NOT minimize, discount, distract or otherwise suggest palliatives to ease these concerns. The more society and those around us discount the reality of the consequences at hand, the more anxious we become and the more maladaptive our responses" (Edwards, 2008, para. 7). She goes on to say that "we need to respect the psychological stages we can expect ourselves and others to go through and respond to them caringly in ways that teach us about ourselves, where we and our culture fit into the forces that are at work, and what we need to differently as individuals and communities to protect ourselves" (Edwards, 2008, para.12). In my report I hope to reveal some of the ways that we can respond to these difficult emotions with grace and resilience as we attempt to move forward.

1.1.2.1.   Alternative Terminology

An interesting version of the term eco-anxiety is 'pre-traumatic stress disorder'—a term coined by Lise Van Susteren, a psychiatrist who specializes in the psychological effects of climate change. In a recent interview with Susteren published by the Johns Hopkins Bloomberg School of Public Health, she explains that "much of traumatic stress disorder is how we imagine things are going to be … we have in our minds images of the future that reflect what scientists are telling us; images of people and animals suffering because of dumb choices we're making

today. I would say it's an entirely legitimate condition—accompanied by a non-stop gnawing sense that more needs to be done" (Myers, 2017, para.3). This leads to the important point (which will be expanded upon below) that a remedy for eco-anxiety is action. Acknowledging that we all have the power to both contribute to and oppose climate change is the first step. The second is to act in a way that tips the scale towards the opposing side in order to create a better life for ourselves and our children.

Another common phrase used in this context is environmental grief, which is more descriptive of the feelings of sadness and loss that often accompany awareness about environmental degradation. Kriss Kevorkian, a Washington State-based thanatologist, believes that "real motivation depends on people acknowledging their 'environmental grief,' a term she coined after studying the decline of killer whale populations" (Rosenfeld, 2016, para. 1). It is my understanding though, that different emotions serve as motivators for different people. For some people it is grief about the state of things that propels them into action, for some it's anxiety, for some it's anger. Often though, these more negative emotions need to be paired with a sense of hope or excitement about the future. Cultivating the delicate balance of emotions that propel us to act can be a complicated task.

1.1.3. *Climate Change and the State of the World*

One of the basic understandings underlying my work is that climate change is having a profound impact on both human and natural systems on a global scale. Swim et al. begin their groundbreaking article "Psychology's Contributions to Understanding and Addressing Global Climate Change" with a summary of how the Intergovernmental Panel on Climate Change (IPCC) defines human-induced climate change. They explain that "Earth's climate has changed in many ways over geological time, but for the first time, over the past century, human activity has become a significant cause of climate change. By burning fossil fuels, cutting and burning forests, and engaging in other environment-impacting activities, humans have changed the heat balance of Earth sufficiently that the global average temperature has moved outside the range that has characterized the 10,000 years of recorded human history" (Swim et al., 2011, p.241).

Also important to note is that, "Global climate change is generally discussed in the context of other environmental challenges. Some of these are causally connected to climate change, such as resource depletion and loss of biodiversity; others, like overpopulation and pollution, are more separable from climate change, but will combine with it to accelerate the

trend toward increased competition for decreased environmental resources" (Swim et al., 2010, p.48). Although my work tends to focus mainly on climate change, it's critical to remember that climate change does not occur in a vacuum. While I won't always mention other examples of environmental degradation, that does not negate the fact that they are inseparable from our understanding of the current state of the world in general and of climate change specifically.

The other premise of my work is that the impact that climate change is having on mental health is not something to be taken lightly. The seriousness and scope of its implications have been analyzed by Bourque and Willox who after undertaking a rigorous review of past research found that "A wide range of climate-related mental health outcomes have already been documented as a result of both acute and longer term climate and environmental changes: elevated rates of anxiety and mood disorders, acute stress reactions and post-traumatic stress disorders, higher frequency of violence and conflicts, increased drug and alcohol abuse, strong emotional reactions such as despair, fear, helplessness and suicidal ideation, decreased sense of self and identity from loss of place and grief reactions" (2014, p.416). These impacts are especially prevalent for groups "including children, the elderly, rural and urban poor, racial and ethnic minorities, those with a previous history of emotional disability, and in general, those with a marginalized predisaster existence" (Swim et al., 2010, p.47). This list is cohesive with Fritze et al.'s findings that "groups that appear to be more at risk include individuals with existing depression or anxiety disorders, those working in the field of climate change, and children and adolescents" (2008, p.7). While more research can and should be done on how climate change is impacting the mental health of more marginalized groups (see Bourque & Willox, 2014 for an example), my research focuses specifically on young adults at Melbourne University for the reasons listed below.

1.1.3.1.   *Significance of Young Adults*

For this study I chose to interview young people between the ages of 18-25. These students are on the brink of adulthood and of becoming the primary caretakers and decision makers on this planet. They have also grown up in a time marked by unprecedented levels of fear and uncertainty about the future. Although throughout the course of history there have been many crises faced by Australians on both the national and global scale, I would argue that the threats presented by environmental degradation and climate change have the potential to be more devastating and far-reaching than anything encountered previously. As explained by Jessica G.

Fritze, Grant A. Blashki, Susie Burke, and John Wiseman in their article "Hope, despair and transformation: Climate change and the promotion of mental health and wellbeing," "The psychological impact of climate change as a global phenomenon has a lifecycle aspect. Children and young people growing up with an uncertain future that is not of their making may experience the threat of climate change very differently from their parents and grandparents" (2008, p.6).

The anxieties surrounding this uncertain future were well-documented by a nationally representative survey of 600 Australian children between the ages of 10-14. The survey, which was put out in 2007 by the Australian Childhood Foundation in conjunction with Child Abuse Prevention Research Australia found that "Children's sense of their place in the world is under threat. Children are particularly concerned about the environment. Over a half of the children surveyed are worried about not having enough water. Just over four in ten (44%) are nervous about the future impact of climate change and 43% of children are worried about air and water pollution. . . . A quarter of the children are so troubled about the state of the world that they honestly believe it will come to an end before they get older" (Tucci, Mitchell, & Goddard, 2007, p.7). The children who participated in this survey are now the same age as my primary research group. If we want to have any hope of addressing climate change in an effective and efficient manor, we need to address the needs and concerns of the people. Humans may be the main contributors to climate change but we are also the only ones with any hope of turning things around. Taking the concerns of our children and young people seriously is an excellent place to start.

1.1.3.2. Climate Change in the Media

The ways in which the media portrays climate change have a huge impact on the responses elicited by the general public. Therefore, when attempting to analyze people's mental responses to climate change, the role of the media should not be underplayed. In their report *Psychology & Global Climate Change: Addressing a Multifaceted Phenomenon and Set of Challenges*, Swim et al. state that "Media representations are a powerful and arguably primary mediator of climate change impacts for most individuals" (2010, p.47). They go on to explain how "continual exposure to information engendered by modern technologies (e.g., vivid and instantaneous Internet images) raises the salience of global crises and can engender anxiety or passivity in the face of seemingly overwhelming threats" (Swim et al., 2010, p.48). This is

especially relevant to the younger generation whose lives are undeniably saturated with technology and media.

Also, because there are people who may not have clearly seen the impacts of climate change firsthand, their experiences "often occur via virtual media representations of climate change rather than from changes in global weather patterns or ongoing environmental impacts per se" (Swim et al., 2010, p.48). That said, every year it is getting harder and harder to stay removed from the impacts of climate change. Those who don't believe that the lives of themselves and their loved ones aren't being impacted probably aren't paying enough attention.

Lastly, it is more important than ever for the general public to be aware of the sources their information comes from. We live in a time in which political and corporate forces have an unbalanced level of power over media sources. A report released by the Centre for Policy Development reveals that "Australia has an unusually high concentration of media ownership compared to other liberal democracies" (Harding-Smith, 2011, p.6). This, which is closely related to the idea that, "the media have other agendas in addition to providing accurate information—for example, appealing to a particular target audience, sensationalizing a story, presenting an issue as a debate between two sides rather than as a matter of scientific fact…" (Doherty & Clayton, 2011, p.267) cannot be ignored.

1.1.3.3.   Climate Change in Academia

Despite the clear role that psychology plays in the relationship between humans and the natural environment, it is rarely addressed in environmental studies or environmental science classes.

According to the article "Infusing the Psychology of Climate Change into Environmental Curricula" by Susan K. Jacobson, J. Stuart Carlton, and Susan E. Cameron Devitt, "Relatively few courses incorporate concepts from psychology, or more specifically ecopsychology, to present an underlying framework to help students understand the basis of why people's individual and collective actions may reflect denial, exacerbation, or problem-solving solutions to environmental hazards such as climate change" (2012, p.94). The authors understand that "ecological knowledge must be integrated with solutions that address psychological barriers if efforts to alter behavior related to climate change are to succeed" (Jacobson, Carlton, & Devitt, 2012, p.94).

Not only should students be learning about how the psychology of climate change impacts others, they should also be learning how to equip themselves with self-care techniques that enable them to stay strong and resilient as they delve deeper into their studies and eventually into their careers.

1.1.4. *Perspectives on Eco-Anxiety*

1.1.4.1. *Environmental Perspectives on Eco-Anxiety*

Intense feelings of being overwhelmed or burned out are incredibly common for those who consider themselves to be environmentalists, environmental activists, or for those who are currently studying or have careers in the environmental field (or all of these, as they are not mutually-exclusive). Because being aware of what is going on with the environment means being aware that "the entire planet is in peril", it's incredibly important to practice self-care. (Ricketts, 2012, p.253). Aidan Ricketts, author of the book *The Activists' Handbook*, explains that, "You need to be able to acknowledge these feelings, honour them, but not let them paralyse you. The key is to find the places where you are powerful, where you are hopeful and where you have the opportunity to make a difference" (2012, p.253).

In her article "Activist Ecopsychology" Elizabeth Bragg discusses the need for more connection between activists who are dealing with similar issues. She explains that "the journal *Ecopsychology*, and other communication hubs, could present practical ecopsychological tools and processes for individual and group application … As ecopsychological activists, we might have the courage to develop and share more processes as we are inspired by new theory, opening the field to more cooperative, transparent collaboration in the pursuit of a common cause" (Bragg, p.17, 2014). This idea of the need for more community engagement comes up consistently throughout my research.

1.1.4.1.1. *Importance of Nature Connection*

Another important concept that is related to eco-anxiety is nature connection. Swim et al., 2010 have determined that "In terms of human health and wellness, an underappreciated consequence of climate change may be the opportunity costs represented by decreased access to thriving ecosystems" (p.48). Their analysis of an accumulating body of research suggests "nearby nature has positive effects on physical and mental health" (Swim et al., 2010, p.48).

Interestingly, nature connection has also been tied to psychological resilience. Researchers Keith Ingulli and Gordon Lindbloom conducted an investigation on this topic and

found that "Individuals who scored higher on a measure of connection to nature were likely to score higher on a measure of psychological resilience" (2013, p.53). They concluded that "As resilience can help individuals maintain a sense of positive mental health, this correlation supports the tenets of ecopsychology, which emphasizes a link between positive mental health and a perception of experiencing a connection with the natural world" (Ingulli & Lindbloom, 2013, p.53).

1.1.4.2. *Psychological Perspectives on Eco-Anxiety*

To expound on a point that was briefly mentioned above, there is a definitive and important difference between general environmental concern and eco-anxiety. This distinction is summarized clearly by Fritze el al., 2008 who explain that, "Whilst a heightened level of concern in the general community is not unexpected and indeed appropriate, some individuals experience more intense worry that causes distress and/or interferes with normal day to day life" (p.7). A major determinant of these high levels of anxiety and distress is "A perceived lack of personal environmental control" (Swim et al., 2010, p.56).

1.1.4.2.1. *Direct vs. Indirect Impacts of Climate Change*

According to Fritze et al., "There are three key mental health implications of climate change. Firstly, direct impacts of climate change, such as extreme weather events, are likely to have immediate impacts on the prevalence and severity of mental health issues in affected communities as well as significant implications for mental health systems. Secondly, vulnerable communities are beginning to experience disruptions to the social, economic and environmental determinants that promote mental health. Finally, there is an emerging understanding of the ways in which climate change as a global environmental threat may create emotional distress and anxiety about the future" (2008, p.2). I expect that most of the students I interview will be affected more by indirect impacts of climate change as opposed to direct impacts. Throughout my research I will keep in mind that "Even in the absence of direct impacts, the perception and fear of climate change may threaten mental health" (Swim et al., 2010, p.7). There is a glimmer of hope here though. Swim et al. explain that "there is reason to believe that positive consequences are also possible—as people take collective responsibility for a shared problem" (2010, p.7)

1.1.5.   Healthy Responses of Eco-Anxiety

The 'collective responsibility for a shared problem' mentioned above will begin with individual actions. This process must involve a reframing of how much power we believe we have—both over our own emotional states and the state of the world. In their book *Active Hope: How to Face the Mess We're in Without Going Crazy*, Joanna Macy and Chris Johnstone explain that, "Whatever situation we face, we can choose our response. When facing overwhelming challenges, we might feel our actions don't count for much. Yet the kind of responses we make, and the degree to which we believe they count, are shaped by the way we think and feel about hope" (2012, p.2).

1.1.5.1.   Coping Mechanisms and Taking Action

According to Swim et al., "Adapting to and coping with climate change is an ongoing and ever-changing process that involves many intrapsychic processes that influence reactions to and preparations for adverse impacts of climate change…" (2010, p.7). One way to learn to cope with challenging emotions surrounding climate change is to get involved with the relatively new organization Joyality. Joyality offers "an 8-week experiential and online ecopsychology program that includes guided meditations and journaling practises, supported by weekly sharing circles with accredited facilitators" (Bragg & Taylor, 2017). The goal is to help those who are feeling overwhelmed by the state of the world feel empowered, positive, and prepared to make changes in both their own lives and in the world around them.

1.1.5.2.   Psychological Responses

While embracing personal power is a huge part of responding to eco-anxiety in a healthy way, the important role that psychologists and professionals can play should not be undermined. In their article "The Psychological Impacts of Global Climate Change" Thomas Doherty and Susan Clayton explain that, "Psychologists are well positioned to provide guidance on what constitutes healthy coping with the psychological impacts of global climate change and to intervene in situations of mental health injury or disordered adjustment. Optimal coping with the threat and unfolding impacts of climate change is likely to entail a number of factors, including accurate recognition of risks, effective management of emotions and problem solving, a focus on prosocial outcomes, and engagement in actions that have a reasonable chance of mitigation and adaptation" (2011, pp.271-272).

It is my belief that, in the face of climate change, mainstream psychology should begin to embrace some elements of ecopsycholgy. In their article "Climate change: The next challenge for public mental health?" Bourque and Willox suggest that, "mental health professional curricula further highlight the relevance of the environment to human health, and that the health impacts of climate change be incorporated into the training and continuing education of the mental health workforce, with priority to those serving the most vulnerable population groups" (2014, p.419). They expand on this idea by calling "for a new paradigm for transforming our understanding of human health and well-being and its relationship to the environment and natural world" (Bourque & Willox, 2014, p.420).

2. Methods and Ethics

2.1. Ethics Approval and Informed Consent

Before beginning my research, I received ethics approval by the Local Review Board (LRB). Before conducting any of my interviews I received oral informed consent from each of my participants. I made sure what they knew what their words were going to be used for and I got their permission before recording or taking notes on the interviews. I also asked everyone if they would like to remain anonymous and how they would like to be described.

When sharing my surveys on Facebook I included I short description of my research so everyone would know what their responses were being used for. All surveys were anonymous.

2.2. Location

I chose to conduct my research in Melbourne mainly because of the large university there. I also wanted to be in a metropolitan area with good public transport so that I would be able to access as many people and resources as possible. Another motivation of my choice was that Melbourne is known to be a hub for sustainability and environmentalism—which makes it a fitting location do a research project on the psychological impacts of climate change and environmental degradation.

2.3. Student Interviews

Between April 3rd and April 28th 2017 I conducted interviews with seven students, four of whom currently attend the University of Melbourne. Of the three who are not current students, one is a recent graduate of the University of Melbourne, one is a recent graduate of Deakin University, and one has not yet attended university but works at the food co-op in the Union House at the University of Melbourne. I met all of these students either through the Enviro Collective at the University of Melbourne or through referrals of friends of theirs who I had interviewed previously. The interviews were designed to take 30 minutes and most were about that long. A few were around 20 minutes and several were closer to an hour. For a list of sample student interview questions, see Appendix B.

These interviews all included the same list of questions which I tweaked a bit depending on how the conversation with each interviewee was flowing and what they seemed most interested in talking about.

All of these interviews were done in-person which allowed me to have fairly personal conversations with the young adults I spoke with. It also allowed me to prompt them for further

information in areas that they seemed knowledgeable about or particularly interested in. For the most part they seemed very willing to open up to me and to engage with the topic.

2.3.1. List of Students and Young Adults Interviewed

The young adults I interviewed for my research are:

1. Kudra, 1st year student at the University of Melbourne
2. Darcy, recent graduate of the University of Melbourne
3. Marls, 3rd year student at the University of Melbourne, double majoring in Geography and Politics
4. Lucy, 4th year student at the University of Melbourne, double majoring in Criminology and English Literature
5. Anika Bieg, age 20
6. Anonymous 1, A community organizer and recent graduate from Deakin University
7. Callum Simpson, 3rd year student at the University of Melbourne, pursing a Bachelor of Science in Geology

2.4. Student Surveys

In order to also get a broader and more generalized sample I chose to develop a student survey as well. The goal was to create a survey that could be taken by students of all disciplines and would therefore provide data on not just eco-anxiety, but also on general stress and anxiety. It can sometimes be difficult to separate out and distinguish the many causes for emotional distress so I wanted to provide students with a chance to share their experiences with and coping mechanisms for whatever types of anxiety were most relevant for them.

The survey had 9 questions and was designed to take between 5 and 10 minutes to complete. The first few questions asked about demographics (age, gender) and the later questions asked about causes of stress, coping mechanisms and support, environmental studies classes, and nature connection. As a way to incentivize the survey and in order to enable me to give something back to my survey participants, I included an option at the end for participants to provide their email if they wish to receive a tips/results sheet. To see a list of the survey questions I asked, see Appendix A.

The first survey I created was called 'Uni, Stress, and You!' I shared it on several University of Melbourne Facebook groups and student profiles. After waiting a few days for results it became clear that it was going to be difficult to get students to take a survey created by a student

who didn't attend their university. At that point I decided to also share the survey with my own Facebook friends in order to try and get a larger and therefore more accurate data pool. In doing so I opened up the survey to all university students of all ages from any country.

When I shared the survey with the broader audience I changed the title to 'Students, Stress, and The State of the World.' The main reason I did this was because 'uni' is not a commonly used abbreviation in the US. I also thought including the phrase 'State of the World' in the title would encourage more responses. Between the dates of April 7, 2017 (when 'Uni, Stress, and You!' was first shared) and April 30, 2017 (when I closed both surveys) I received a total of 104 online responses. I also spent two hours walking around the University of Melbourne campus and handing out paper versions of my survey. In doing so I was able to collect 10 more responses which brought me to a grand total of 114 survey responses.

After collecting the responses, I undertook quantitative analysis and used graphs to determine key patterns. I have presented these findings in the results section. See Figures 1, 2, 3, and 4 on pages 16-18.

2.5. Interviews with Lecturers, Researchers, and Psychological Professionals

In order to get perspectives on eco-anxiety from professionals and experts both in the fields of environmental studies and psychology, I also interviewed psychological professionals, lecturers, and researchers. For sample lecturer/researcher interview questions, see Appendix C. For sample psychological professional interview questions, see Appendix D.

They experts I interviewed were able to provide not only anecdotal evidence about their own experiences with eco-anxiety but also information about how the psychological impacts of climate change are being addressed in their respective fields and how they believe that we should cope and move forward, both on the societal and individual levels.

While these interviews included some of the same questions in the beginning (about personal experiences with eco-anxiety, how their experiences compare to those of colleagues and friends, and how they believe eco-anxiety is being addressed in their fields) the middle questions were more specific to the profession, area of research, or interests of each particular person. I generally ended the interviews with a question about their vision for the future of the fight against climate change.

2.5.1. *List of Lecturers, Researchers, and Psychological Professionals*

The psychological professionals, lecturers, and researchers I interviewed for my research are:

- Janet Stanley, Principle Research Fellow – Urban Social Resilience at the Melbourne Sustainable Society Institute

- Anonymous 2, Research Fellow and Postdoc at the University of Melbourne

- Kathryn Williams, who works in the field of Environmental Psychology at the University of Melbourne and leads the Master of Environment, a large interdisciplinary program in environment and sustainability

- Professor John Wiseman, Deputy Director of the Melbourne Sustainable Society Institute, University of Melbourne, Professorial Fellow, Melbourne School of Global and Population Health, and Fellow at the Centre for Policy Development

- Stephanie Campbell, Researcher at the University of Melbourne and recent postgraduate of the London School of Economics and Political Science

- Carol Ride, Psychologist, climate activist, and convener of the non-profit Psychology for a Safe Climate

- Paulina Howfield, Transpersonal Counsellor, and Holistic Integrative Arts Therapist

2.6. Limitations and Shortcomings

The main limitation of my research is that it looks at a fairly narrow scope of the population. The young adults I interviewed all work, live, and socialize in the same circles. The students who completed surveys were generally either Facebook friends of mine or of the students I interviewed. Also important to note is that several of the professionals and experts I interviewed are affiliated with the Melbourne Sustainable Society Institute.

That said, I did my best to talk to people with a variety of different experiences, backgrounds, and areas of expertise. Each person I interviewed provided me with their own personal anecdotes and interpretations of the world. I am very pleased with the range of information I was able to gather considering my geographic and time constraints and I think my work provides a basis which can easily be built and expanded upon in the future.

3. Results

3.1. Survey Data

I have organized the results of some of the questions of my survey into graphs in order to more easily pick out key patterns from the data. My findings are displayed below.

As shown in Figure 1, the highest number of students surveyed reported high levels of general stress and anxiety. This was followed by moderate levels, very high levels, and then low levels. Only 1 of the 114 students surveyed reported very low levels of stress and anxiety.
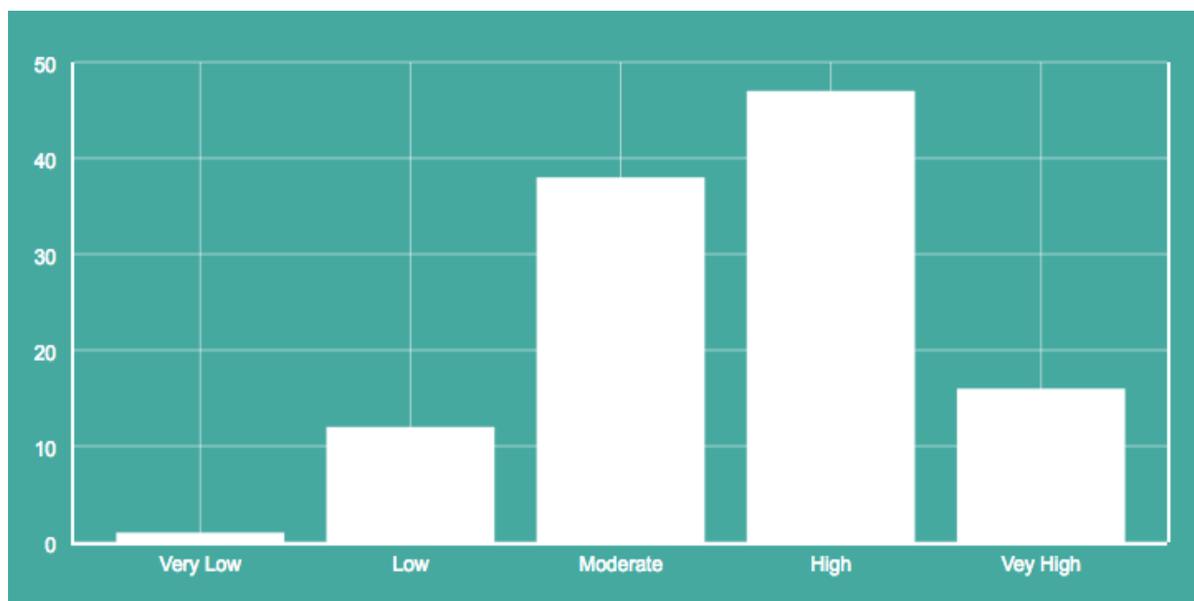
Figure 1. Levels of general stress and anxiety among university students

As is depicted in Figure 2, students also were also asked about their levels of stress and anxiety related to climate change and the state of the world. The most common response from students in non-environmental majors was moderate levels of stress and anxiety in this area. Unlike the non-environmental students, who generally felt moderate to high levels of concern, the highest number of students in environmental majors reported very high levels of environmental concern. There was clear upwards trend in this group, with the fewest number of students (3) experiencing low levels of stress and anxiety related to climate change and the highest number of students (10) experiencing very high levels.
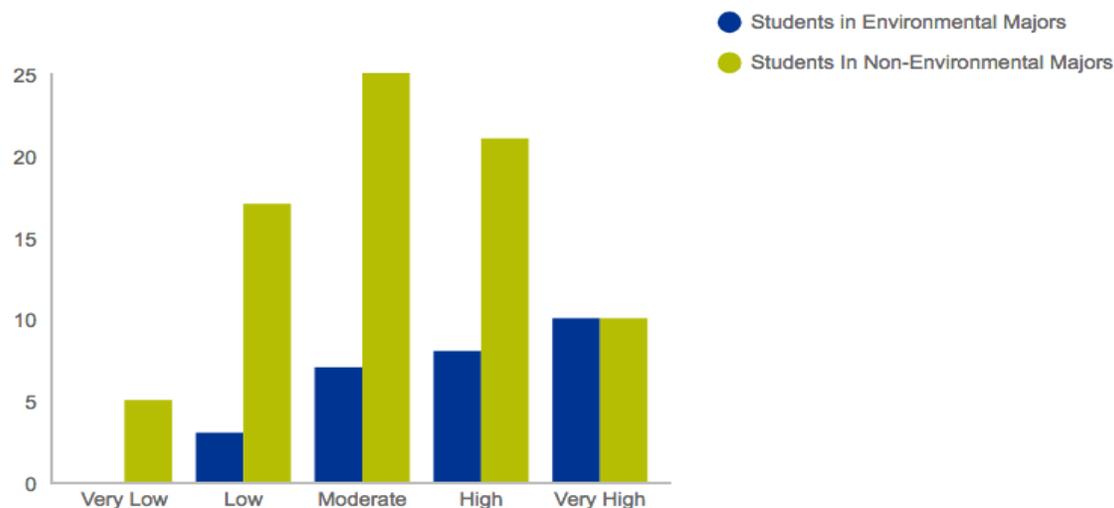
Figure 2. Levels of stress and anxiety related to climate change and the state of the world as reported by university students in both environmental and non-environmental majors

One of the survey questions asked students how well they feel that their environmental studies classes psychologically prepare them for the information they receive. They were asked to respond on a scale of 'Very Poorly—I end up feeling depressed and distressed after my classes' to 'Very Well—I feel alert, motivated, and empowered to take action after my classes.' Figure 3 shows that an equal number of students felt their classes prepared them poorly and moderately well. Slightly more students thought their classes prepared them poorly or very poorly (21) than well or very well (19).
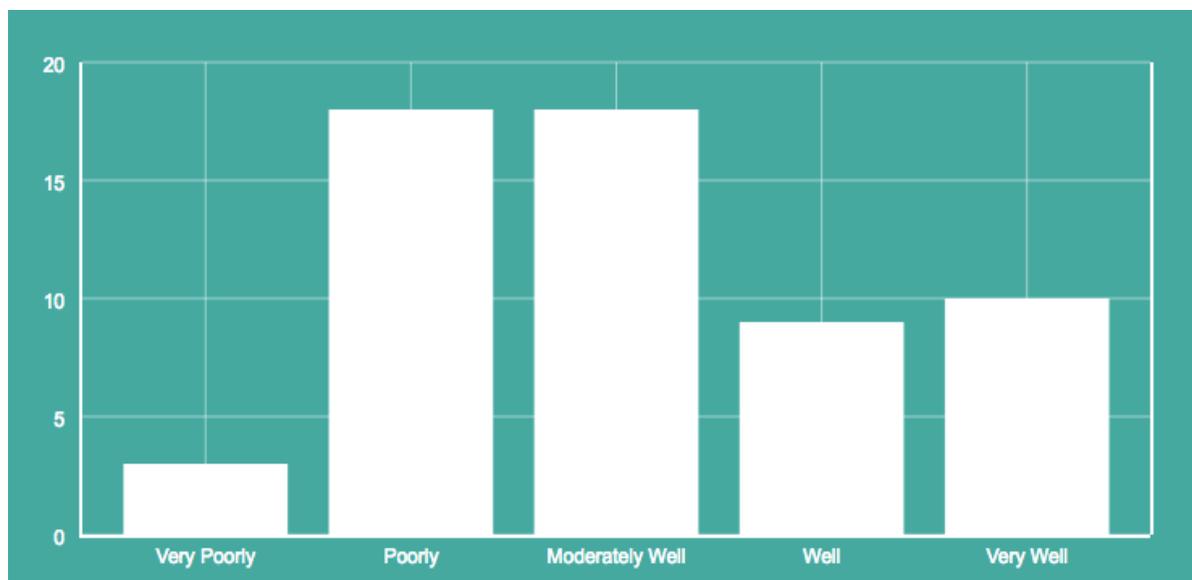
Figure 3. How well students feel their environmental studies classes psychologically prepare them for the information they receive

The final question I asked students was about how important nature connection is to them in terms of mental health and psychological resilience. As is shown in Figure 4, 52 of the 109 students who responded to this question consider nature connection to be very important. 'Very Important' was chosen slightly less than half of the time. The least common response was not at all important—only two students felt that way.
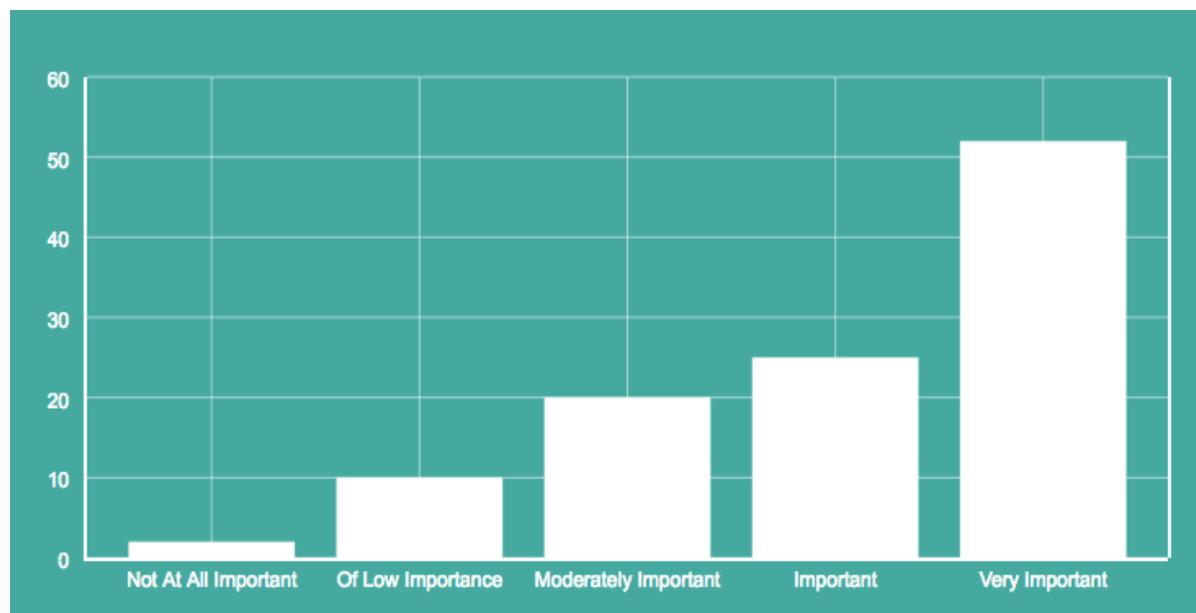
Figure 4. How important university students consider nature connection to be in terms of mental health and psychological resilience

3.2. Student Interviews

Throughout my student interviews most of the young adults I spoke with discussed how eco-anxiety manifests itself for them, their distrust of mainstream media, how they don't believe that most of their classes psychologically prepare them for the information they receive, the importance of nature connection, and the importance of finding community. I ended each interview by asking them what their top three tips would be for another young person who is also dealing with eco-anxiety. In order to analyze this data, I put it into a table which includes a list of the general ideas of the tips that were mentioned, as well as the number of times they were brought up by different people. Table 1 shows that most common tips were the importance of getting in touch with one's own emotions and of finding community. I think all of these tips are valid and that they deserve the consideration of someone who is looking for ways to manage their eco-anxiety.

Table 1. Student tips on how to best cope with eco-anxiety

General Idea of the Tip	Number of Times it was Mentioned
Get more in touch with your emotions and practice self-care	5
Find community	4
Be informed	2
Remember that it's ok to step back when you need to	2
Educate others	2
Look out for your friends	1
See a psychologist or counselor	1
Spend time in nature	1
Express yourself through writing and art	1
Take action and exercise your own personal power	1

3.3. Interviews with Lecturers, Researchers, and Psychological Professionals

While the experts that I spoke with came from a variety of fields and backgrounds, they all had experience with eco-anxiety or similar difficult emotional reactions to climate change and the state of the world. Many of them spoke about the importance of the role of media and some of the challenges that it is currently facing. They also talked about climate deniers—both the psychology of denial and the best ways to interact with it. Several of them also touched on the importance of empowering young people, the importance of nature connection, and the importance of community connection.

4. Discussion

4.1. Student Experiences with Eco-Anxiety

Interestingly, in regards to the data collected through the surveys, students' levels of general stress and anxiety and stress and anxiety related to climate change and the state of the world followed the same trends, although the numbers were slightly different. In both areas the highest number of students reported high levels of stress and anxiety, followed by moderate levels, then very high levels, low levels, and very low levels. This is shown in Figures 1 and Figure 2 on pages 16 and 17.

During the interviews, I found that the young adults I spoke with all had different experiences with eco-anxiety and varying emotional reactions to climate change and the state of the world. One commonality for a few of them though, was the need to pull back and as Darcy, a recent graduate of the University of Melbourne said "interact with it in a limited way" (Darcy, 2017). He explained that he tries "not to dwell on it because it's too stressful and anxiety provoking…I know enough to act and anymore is just probably going to overload me" (Darcy, 2017).

Marls, a 3rd year student at the University of Melbourne responded to my question about their level of stress and anxiety regarding climate change and the state of the world by saying, "I've definitely disengaged with environmental issues a lot over the last few months just because it's so stressful and overwhelming as well to think about. I think because climate change permeates our whole entire lives and particularly I think for young people… I don't see a future and I don't see anywhere that we can go on the trajectory we're on" (Marls, 2017). Marls' words point out the how difficult this topic can be—especially for young people who are trying to grapple with the uncertainty of the future.

A young community organizer and recent graduate from Deakin University that I spoke with brought up another emotion that is commonly associated with responding to the consequences of climate change. She said, "Just being involved with the issue of climate has brought about periods of depression for me. And something else that's been hard to deal with is experiencing activist burnout and not being able to do anything. Which is really hard because that disassociates me from my identity because being an activist is where I feel like my place in the world is" (Anonymous 1,2017). Almost all the young people I spoke with see themselves as activists and as people who are working on the front lines of these issues. It's important to

recognize that for many activists, like this recent Deakin graduate, their hard work brings them great joy and fulfillment while also sometimes taking a huge toll on their emotional wellbeing.

One of the most pessimistic responses came from Callum Simpson, a 3rd year Geology Major and student activist. Though when he spoke, his tone was not at all despairing. He spoke in a very matter-of-fact, almost cheerful manner. He said, "I have a pretty good understanding of how fragile the ecosystem is… We're in the 6th mass extinction at the moment of the Anthropocene epoch. Everything is incredibly fragile and I feel like the most likely occurrence, in my mind, is that we drive ourselves as a species to extinction and take a whole lot of other stuff with us. I think that's going to happen and yet in my everyday life it doesn't bother me so much. It drives me sometimes. I act upon it…I don't know how vain an attempt it is to stop it. I have made peace with the destruction of ourselves. I used to dwell on it a lot in high school. I guess I got used to it." (Simpson, 2017).

Callum exemplifies something here that I saw over and over again—incredibly passionate and active young people who have fairly pessimistic and hopeless view of the world. Their realism and deep understanding of what's at stake doesn't seem to stop them from taking action in the best ways they know how.

4.2. Expert Experiences with and Perspectives on Eco-Anxiety

When I asked Kathryn Williams, who works in the field of environmental psychology at the University of Melbourne, if she had ever heard the term eco-anxiety, she said, "I don't think I've heard that before but it makes a lot of sense intuitively and experientially" (Williams, 2017). She said she hadn't always felt eco-anxious though, that it impacted some of her colleagues in different disciplines before it really started impacting her (Williams, 2017). She explains, "As psychologists we spend a lot of time thinking about the individual scale and the small scale and I think my colleagues who have been operating more at the political and global scale probably hit a point of hopelessness before I did" (Williams, 2017).

When asked about what emotions she feels about climate change and the state of the world, Stephanie Campbell, researcher at the University of Melbourne and recent postgraduate of the London School of Economics and Political Science, discussed her emotional response to "events all over the world... When I see climate related disasters overseas or on the news I really feel such a depth of empathy for people and sadness. And I think the anxiety aspect feels more like it comes from that fear of 'are we actually going to do things fast enough to address this and can

we actually overcome these challenges that sometimes potentially feel insurmountable'" (Campbell, 2017). Campbell brings up a great point here about what prompts many people to experience anxiety vs. sadness and grief. For many of my interviewees, they experienced great sadness for the present, for species loss, human suffering, and natural disasters. The anxiety came about when thinking about the future—the instability of our future agricultural systems, economies, and homelands, as well as what the world is going to look like for our children and grandchildren.

Campbell brought up another interesting point along this vein. She said, "I think an interesting angle is my social circles is that I'm just getting to the point where my friends are deciding to have kids or thinking about having kids and that's been a really big source of anxiety, eco-anxiety for people. Some of my close friends have been saying 'should I be bringing a child into the world and what does that look like and is that responsible, can it help, there's so much uncertainty, and we don't know what the world's going to look like.' In my personal circles that's been a big source of eco-anxiety" (Campbell, 2017). To come out of this heavy topic she ended on a positive. She brought up the important point that people need to pair their difficult emotions with hope (Campbell, 2017).

What Campbell says about needing both negative and positive emotions is also expressed by James Jasper in his article, "The Emotions of Protest: Affective Reactive Emotions in and around Social Movements". He says, "Not only are emotions part of our response to events, but they also—in the form of deep affective attachments—shape the goals of our actions. There are positive emotions and negative ones, admirable and despicable ones, public and hidden ones. Without them, there might be no social action at all" (Jasper, 1998, p. 398).

This ties into what John Wiseman, the Deputy Director of the Melbourne Sustainable Society Institute, had to say about the importance of looking at climate change through a psychological framework. He explains, "The way in which people approach the issues emotionally, psychologically, the values they bring to it, that's all really important. Not just emotions but a whole range of psychological frames and filters are really important in the way in which people understand environmental challenges and other political challenges and climate change. They're also important in the extent to which people turn understanding into action" (Wiseman, 2017).

A research fellow and postdoc at the University of Melbourne that I spoke with had experienced a whole range of emotions concerning climate change and the state of the world. He started off by explaining that "There's great concern and justifiably great concern about what's going to happen to planet, I think. If you take the scientists at face value, on the information that they are actually pumping out. Things are actually looking bad. And then if you just overlay the other threats and so on that extend from a 2- and 3- and potentially 4-degree warmer world, you could be looking at serious issues of violent conflict and so on. Which adds to the stress... So there's overlapping and overlaying concerns" (Anonymous 2, 2017) This idea of overlapping concerns was expressed by many of the people I spoke with. Climate change is a multi-faceted issue and it's often difficult to pull it apart.

After speaking about stress he went into his "sense of frustration that senior policy makers around the world aren't doing something, aren't actually implementing policies that are consistent with what these hugely impressive and dedicated scientists are producing" (Anonymous 2, 2017). He further explained that anger "can be an emotion that really sort of fires you up and gets you motivated but I think a more useful emotion is that sense of hope" (Anonymous 2, 2017).

Carol Ride, psychologist, climate activist, and convener of the non-profit organization Psychology for a Safe Climate also expressed that when she works with climate activists, the most common emotion she sees is anger (Ride, 2017). This is in line with what the research fellow and postdoc mentioned above said about anger as a motivator. Many of the student activists I spoke with also spoke about anger. There definitely seems to be an underlying level of animosity that many climate activists feel towards people they feel should be taking action, but aren't.

4.3. Interviewee Perspectives on The Role of Media

While researching the emotional reactions that people have to climate change, I decided it would be important to also look into some of the key influencers on people's perceptions of what is going on in the world. One of the main ways people get their information is through the media so I chose to ask all of my interviewees about how they interact with and respond to media forces.

A common theme throughout my interviews was a general sense of distrust of many news sources, especially those which people considered to be 'mainstream.' For example, Anika Bieg,

a 20-year-old who lives in Melbourne, explained that "media does influence me and play a big role but I always try to use trustworthy sources…you can't really trust any newspaper" (Bieg, 2017). Similarly, Marls said, "I don't believe in journalistic integrity in the mainstream media, I don't think it exists anymore" (Marls, 2017).

Darcy also expressed a huge lack of trust in the media but he followed up by saying, "I don't think it's so much the journalists, I think it's much more the people that own the companies and that choose what is being put on the platter. I think there's lots of good journalists that want to do good and report well, it's just the directives they're given to keep their jobs and produce what sells" (Darcy, 2017).

Callum Simpson had critiques of both the left and right wing media. He said, "Whenever I do interact with the mainstream media it feels like there are those who are there simply to confuse (particularly the conservative parts of the media) and there are those who are there to simplify. And simplifying just mainly mollifies that anxiety. It's just trying to make people feel ok, because that's going to get more people to watch than terror. Basically, coverage is pretty crap. It's just not sufficient for anyone to be able to understand the issues or to really feel like they need to, or can, take action… I feel like the leftist media, the more kind of socialist stuff, is based on the assumption that you are already up to speed and then what do about it. Which can be great and really useful, but harder to access for some. There really isn't a point of call for those who need to learn" (Simpson, 2017). He brings up a great point here about how inaccessible the media has become for some people. Perhaps this is part of reason why social media has become so much more predominant.

Both the community organizer and recent graduate from Deakin University as well as Lucy, a 4th year student at the University of Melbourne spoke about how getting most of their news from Facebook was affecting them. The Deakin graduate said, "It probably has a negative impact on me because I log into Facebook and all the pages I like have stories like 'the world's burning.' And seeing that in your downtime or the first thing when you wake up is not healthy" (Anonymous 1, 2017).

Lucy explained that she "spend[s] a lot of time looking at media on Facebook. So news sites like The Guardian and stuff. They always pop on my newsfeed. It's really interesting comparing your Facebook newsfeed to other people's, especially if they're not activists. So almost every second non-friend thing, so from the media, that I look at on my newsfeed on Facebook is

something about climate change or the environment. So I think that really intensifies my perception of what's going on as well. It feels like climate change is everywhere. Which can be good and bad…a bit overwhelming at times" (Lucy, 2017).

These reactions are in line with the BBC report that "Facebook is the most powerful force in global news, potentially offering publishers access to vast audiences but leaving them dependent on the whims of its algorithm" (Wakefield, 2016, para. 11).

John Wiseman provided an incredibly in-depth assessment of what he understands to be some of the main problems with how dominant media presents issues like climate change. He said, "The mainstream media tends to have presented the basic arguments of climate science with some degree of accuracy. There is reasonable communication of what the latest IPCC reports are, that kind of thing. Having said that, I think there are two limitations. One is that there has been an increasingly effective attempt to muddy the waters, to sow doubt... So to say, 'we don't really know, it's all very confusing'. The point is that exactly the same strategies that were used to sow doubt about the health impacts of tobacco have been used in relation to climate change. Indeed, in some cases, exactly the same people and exactly the same companies. So the entire denial and climate skeptic strategy…sometimes we have the sense that it's just a few somewhat eccentric characters but I think there's a fair bit of evidence that it's been more strategic and systematic than that" (Wiseman, 2017).

Wiseman is correct, there is a lot of evidence on the intersection between the oil and tobacco industries. One example is a 2016 article published by Scientific American which explains that, "Documents housed at the University of California, San Francisco, and analyzed in recent months by the Center for International Environmental Law (CIEL), a Washington, D.C.-based advocacy group, show that the oil and tobacco industries have been linked for decades. The files CIEL drew its research from have been public for years" (Hulac, para. 4).

Another point Wiseman made is that "the media has been OK at presenting the core conclusions or implications of climate science. I think what's been much less successful is communication of the scale and scope of the action required and the solutions that are available… If we really honestly look at the risks of climate change and the speed and scale of action required to do something about it – if you're at all serious about keeping global warming below 2 degrees…then you have to be aiming to get global emissions down to zero extremely fast and no later than about 2040, 2050. To do that, it's not a small change" (Wiseman, 2017).

He went on to explain that central challenge for media is to "find the right balance between an honest and accurate understanding and assessment of the risk or the scale of the problem, on the one hand. And then to have an understanding of potential solutions so that you aren't paralyzed" (Wiseman, 2017).

Kathryn Williams has personal experience with this phenomenon. When asked about her emotional reactions to climate change she said, "It's just paralyzing more than anything else. I have to really manage what I attend to. I have to read the news really carefully ... So I have to manage my emotional resources by, on the one hand thinking carefully about what I expose myself to, just so that I can go on with the rest of life. But on the other hand thinking about what's the strategic use of my time so that I'm contributing to finding solutions and at a personal level feeling ok about my own existence and my own impact" (Williams, 2017).

Hopefully new forms of media will continue to emerge that are able to strike the balance that Wiseman mentioned so that people will be able to tune in and become informed but also walk away with a sense of personal power and a better idea of what they can do to help find solutions.

4.4. Interviewee Perspectives on Climate Change in Academia

Along with media, another important source of information for young people is university. I asked most of my interviewees about how their classes addressed climate change and whether or not they felt good solutions were provided to them in that context.

In response to my question about if classes presented solutions, Callum Simpson said, "Not so far. My classes have not. There's a master's seminar in my department in carbon capture…that's the only class in my department that I've seen that discusses solutions. We have not yet discussed them in any classes of mine" (Simpson, 2017). He went on to explain that "from activism I have an understanding of solutions we have available. Not so much scientifically but more politically" (Simpson, 2017). This shows another common theme. Many of the students I spoke to did not feel that their classes provided them with many solutions so they turned elsewhere—most of them to activism—in order to learn how to take things into their own hands and start creating solutions.

The community organizer and Deakin University graduate discussed this idea. She said, "When I became an activist that changed my whole worldview… My theory of how to change the world when I was at uni at the start was if I study hard and I learn more about the

environment I can learn how to solve environmental issues like climate change. But when I started going to Greenpeace I realized there was a whole other way, that anybody could take action" (Anonymous 1, 2017). When asked if her classes psychologically prepared her for the information she received she replied, "No, I don't think they prepared me well. They didn't prepare other people well. A lot of people dropped out because they felt hopeless. Classes did bring up solutions but never how to implement solutions other than through getting a job. They never talked about lobbying or campaigning or people power. I feel like that is something that was really missing" (Anonymous 1, 2017).

In response to the same question about if environmental studies classes psychologically prepare students, Marls said "They definitely don't. And I think that speaks a lot to where I am contextually. Like I go to uni in Melbourne. A lot of people in my classes are going to be like white, upper-class, middle-class, people who have grown up in the city and I feel like our exposure to the effects of climate change are therefore quite different to those of for example people who live in the pacific islands or people have actually seen direct consequences of climate change. Urban life is a bubble. We are almost living in a fake reality by being in a city, an urbanized environment. So I feel like maybe that's not even on people's radar, that it can be really traumatizing to talk about climate change. And that might just be because we have the privilege of being able to choose whether or not we want to engage" (Marls, 2017). This speaks to the interplay between direct and indirect impacts of climate change that was mentioned earlier in this paper. While there is no denying that it can be a huge emotional burden to be a student activist, all the young people I spoke with have the option to tune out and take a break when they need to. That isn't the case for those who are living through the direct consequences of climate change.

4.5. Expert Perspectives on Climate Deniers

When looking at the psychological impacts of climate change it's important to not just look at those who are fully engaged with the issue, but also those who have chosen to tune out or even to deny outright that climate change is happening.

When asked about the psychology of denialism, Carol Ride explained that "It's self-protective to put it away... I think there's a sort of dissonance within people where they know something about climate change but at the same time, they know the implications are really unpleasant—in that we're going to have to change so much. And they don't like implications of

the changes we're going to have to make. It creates this very uncomfortable tension within them. And one of the ways we deal with tension is just pushing it away" (Ride, 2017).

Paulina Howfield, transpersonal counselor and art therapist, also talked about the idea of aversion to change. She said "Avoidance is huge for us…We are people and beings in a world that is change and we as a species don't like change. There is always change and there are always cycles" (Howfield, 2017).

Janet Stanley, Principle Research Fellow of Urban Social Resilience at the Melbourne Sustainable Society Institute, brought up another important element in our conversation. She explained that, "Anyone who has had severe trauma of some sort usually copes with stress, or more often copes with stress, less well if they haven't resolved the original issues. So they can cope by denying it and in fact I think that's what has happened with a lot of people who don't find out a lot about climate change. It's easier not to know about it because there's a certain amount of hopelessness and the average person can't do much about it" (Stanley, 2017).

While it can be easy to become frustrated or angry with those who deny climate change, attacking or disregarding them is insensitive and disregards the emotional trauma and turmoil that they might be experiencing.

When interacting with people who are cynical about climate change or in denial that it's happening, Stephanie Campbell says she thinks "it's important when you're working in this space to be able to have conversations with those people and understand where they are coming from. There's a lot of anger there and a lot of feeling judged or misunderstood or alienated by 'the kind of greenies who just want them to change their whole way of life'" (Campbell, 2017).

Similarly, Carol Ride says in those types of situations she always tries to "hear what it is that they are actually saying. I might name the feelings that they seem to be expressing or that are hidden behind what they're saying…If we can connect with what it is that's their key value or feeling behind their position and identify it…it's helpful to them and it also helps them manage to shift things. But it's not magic you know…We have to be patient and hopeful that people can and will change their position. But it's not going to be instant" (Ride, 2017).

4.6. Interviewee Perspectives on Empowering Young Adults

As mentioned above, one of the most interesting trends I found was that most of the young adults I spoke to were very disheartened by the climate crisis yet they all continually took action. When asked about this apparent dissonance, Lucy replied to me by saying "I'm probably more

pessimistic. I think you kind of have to keep telling yourself to be positive. Because otherwise you're not going to get things done. If you fall into despair nothing is going to happen and it's just going to get worse" (Lucy, 2017).

In response to the same question Darcy said, "There's nothing else to do. Well, the other option is to roll over and die. So it's either get on with it or give up. And giving up is an intolerable state to be in because then you just feel horribly guilty and you know like, even worse. Guilt is a bad motivator, so I don't want to get into that state" (Darcy, 2017).

Perhaps the most profound response I got was from Kudra, a 1st year student at the University of Melbourne. She said, "I kind of feel like… as if someone is burning you at a stake and you know you can't untie yourself but you're still going to try to untie yourself while you're burning. Like you can't really just lay there…" (Kudra, 2017). She says she still feels like she has to "put up a fight anyway" (Kudra, 2017).

Despite the great challenges that are ahead for young people, there is a lot of hope that they will be able to accomplish great things. The research fellow and postdoc at the University of Melbourne who I spoke with told me he believes that "one of the great hopes is that your generation is actually really switched on to this … You know you've grown up through your teenage years hearing about it and I would imagine that is a considerable source of anxiety but hopefully you're a generation of doers" (Anonymous 2, 2017).

Kathryn Williams also has a lot of confidence in the younger generation. She explained that "teaching is the most wonderful profession to keep yourself hopeful because I know that even if I feel like I'm not individually having an impact, that teaching actually creates this extended world of influence. So I have all these wonderful, passionate students. Many of them who have activist temperaments. Who are influential in a range of ways, not just by activism but by finding great technical solutions or by designing things better. There's a myriad of ways that they exercise their influence" (Williams, 2017).

4.7. Interviewee Perspectives on Coping Mechanisms

4.7.1. Nature Connection

As expressed in the beginning of my paper, connecting with nature is one of the most important ways that we can begin to take care of ourselves and the planet. Both the students and experts I spoke with had some very insightful things to say about their both their own experiences with nature, and the impact they think it can have on others.

When asked what her top tip would be for other students who are also dealing with eco-anxiety, Kudra said, "Spend heaps of time nature. Just like walk through the forest and meditate and sit by the creek. Just spend as much time as you possibly can in nature" (Kudra, 2017).

When asked about how important nature connection is to her Anika said, "I feel like it's actually really important. I usually spend or try to spend at least half an hour or an hour outside every day. If I can't go outside or have to be in the house the entire day I get desperate quite literally" (Bieg, 2017).

Callum Simpson responded to the same question by saying "To me I feel it's important…I've spent so much time out there. I grew up with it. I feel comforted every time I'm in nature. As well as awed and excited. It gives me perspective as well. It gives me a break from this, from uni, which can get kind of hectic and busy and gives me space to think and sort of challenge how I'm thinking at the moment while also being a space in which I'm comfortable and happy. It's happy memories that I continually relieve, when I'm out in the field or on a hike. So anecdotally for me, very much so. It seems intuitive" (Simpson, 2017).

The community organizer and Deakin graduate expressed that nature was also very important to her—especially as a child. She explained that, "Like most families we had a few hiccups, not ideal financial situations and stuff like that. So my mum was largely unavailable to look after me and my brothers and sisters so I took on a lot of responsibility and at the same time as that during my childhood I also spent a lot of time in nature. And I think that I found a nurturing in nature that I didn't get from my mum for a while. I think that's part of why I have such a deep connection with nature. I really want to protect it and I and feel personally damaged when it's damaged" (Anonymous 1, 2017).

Paulina Howfield also spoke about the interplay between the natural world and ourselves. She said, "I believe that everything is interconnected and that we are all mirrors of each other. So if our planetary health is not at its best that will affect our mental health and if our mental health is not at its best that will affect our planetary health" (Howfield, 2017).

She went on to speak about personal healing through nature connection. She explained that "One of the most profound coping mechanisms is to actually develop a relationship with the earth. And we do that by sitting quietly, going out into nature, finding ways to connect, and we can do things like deep breathing which is a classic behavior to help relax during anxiety. By developing a relationship with the earth, she doesn't just share the grief and that sense of loss and

despair, it's a very strengthening relationship which is why indigenous cultures all over the world have always done that. They have that strong connection with the planet as a living being to nurture, to honor, and to respect. If we take something from this planet we have to give something back. There was always that reciprocal relationship" (Howfield, 2017).

Kathryn Williams also spoke of the reciprocal relationship she feels with nature. She explained that the natural world can "shift our mood and improve our capacity to concentrate, which hooks on to a lot of social good. That connection is mutual. It's an interdependency. When you hurt the other you hurt yourself" (Williams, 2017).

The students and experts I interviewed aren't alone in realizing how important nature connection really is. In her BBC news article "All you need to know about nature deficit disorder" Helen Briggs discusses author Richard Louv's work. She explains that he "coined the phrase Nature Deficit Disorder in his 2005 book *Last Child in the Woods*. He argues that all of us, especially children, are spending more time indoors, which makes us feel alienated from nature and perhaps more vulnerable to negative moods or reduced attention span" (Briggs, 2016, para. 7-8).

4.7.2. *Community Connection*

The other most common response I got when I asked about the best way to cultivate personal power and cope with eco-anxiety was finding community connection.

When I asked him about when he feels most powerful, Callum Simpson said, "You feel really powerful one moment and then you feel incredibly insignificant the next. You kind of have to keep things in perspective. You are one of seven billion people. You are not the only thing going on. And it would be incredibly self-centered of me to think 'I could change the world as an individual.' But at the same time the history of change in the world is consistently collective. Both the good and bad… You have to remind yourself that if you're really dedicated and very thoughtful, with a whole lot of people, you can also achieve things. (Simpson, 2017). He goes on to talk about the specific power of conversation. He says, "Information is powerful. Particularly when talking to others about it. Because it is all about convincing others. And being informed on how others act, on how other people think, on how other people live – it's very important to talk to people. And also having the information at hand so then when people explore, you can be their source of information" (Simpson, 2017).

Lucy had similar things to say about she feels on her own compared to how she feels as part of a collective. In response to my question about how much power she feels like she has she said, "As an individual, not heaps. But as an individual part of a larger campaigns and part of a bigger movement, a bit. Not heaps, but a bit. And I also feel like doing something is better than doing nothing. So even if I don't feel like I have much power, I feel like I have more power trying to actively create change than just sitting back" (Lucy, 2017).

When asked what their top tips would be for someone who is dealing with eco-anxiety, Marls said, "I think finding community is definitely my top one. Not only can a support network relate to how you're feeling, it's so important to just feel validated and be able to resonate emotions and thoughts with people, with other individuals. And also for others to inspire you. And I think that's so important…To be able to hold a space together" (Marls, 2017).

These same sorts of feelings come up at the university level and in the workplace as an adult. Stephanie Campbell explained to me that, "it's really nice to have a sense of solidarity with my colleagues…I think solidarity and feeling a sense of like-mindedness is really important" (Campbell, 2017).

Psychologist Carol Ride has noticed the power of community in her field as well. In the process of facilitating group discussions about reacting to climate change, Ride found that "Some people feel like they're going a bit crazy because they have such deep and troubled thoughts about climate change. But to discover that other people have similar thoughts makes them feel much more stable and rational. They don't attack themselves so much, they're more accepting of how they feel. And that's obviously healthier of course" (Ride, 2017).

5. Conclusion

5.1. Moving Forward: Turning Environmental Concern and Eco-Anxiety in Action

5.1.1. *What's at Stake*

Before we can really begin to move forward and come to terms with how deep the personal, social, economic, and political transformations that need to be made are, we need to make sure that we have an understanding of the gravity of the issues we are facing.

When asked about her vision for the future Janet Stanley said, "Well, I'm not very optimistic. I think we're in for massive shocks. And I think, for instance, in Asia a lot of highly populated cities like Jakarta and Bangkok, and Ho Chi Minh City, multi-millions of people are on low-lying land and they're flooding. Bangkok's in terrible trouble with floods. So there's going to be mass climate refugees. Much more than we've seen to date. So there will be war, which again makes people move, as well as poverty and political strife. And I think that's only going to happen more...But I think probably the world will gear up a lot more to climate change. But it's a toss-up whether it will be too late and whether the feedback loops have got beyond control. And if the polar ice sheets melt, then the sea will rise a lot quicker which will exacerbate all the problems" (Stanley, 2017).

In response to the same question Carol Ride said, "I think if you take on board the seriousness of what the climate scientists are saying it's… I just think it's going to be….catastrophic and… the breakdown of civilization. The loss of civilization really. But that's the most pessimistic view. Which is why I think an enormous amount of energy needs to go towards a social movement to get the change we need while we still have time. And that means supporting people and understanding that some people won't be able to cope with being part of social movement. We have to have compassion for them—because some people will be traumatized by knowing more about climate change. But I don't think that should stop us from taking the action we need" (Ride, 2017). She goes on to explain that, "There's an argument that goes on in the climate community about whether we should tell people it's an emergency. I think we should be but we've got to follow that up with what we should do. And I know for some people that will be tough. But the risk of not doing so is absolutely catastrophic" (Ride, 2017).

When asked about his vision for the future, John Wiseman had a more hopeful response. He said, "I've done lots of interviews with lots of people around the world asking that question. How do we sustain realistic hope in the face of the mounting evidence about the escalating risks

of climate change? This has included many interviews with people who are in influential climate research and policy positions as well as people involved in climate activism. Also people leading technological solutions. One of the ways I put that question to them is: Let's imagine that it's 2040 and we're sitting here and - yes we did largely solve this problem. We did, perhaps to our surprise, find a way forward and it did turn out better how we'd hoped, now how did that happen? In the story that I'm drawing from many of those different interviews there are three or four different ingredients to the most hopeful possible outcome. One of them is the importance of high quality education and science information. It was critical that people understood the climate science evidence. And maybe social media, for example, played an increasingly important role as opposed to what we remember as mainstream media. That's the first thing but that of course wasn't enough. Secondly, there were some extraordinary technological advances. There continued to be extraordinary breakthroughs in renewable energy, energy efficiency, transport, and so on. But it wasn't just breakthroughs in technology, it was also breakthroughs in understanding how people organize cities, how they could do things closer to home, etc. The third driver of change was about leadership, from both above and below. There were political leaders, spiritual leaders, artistic people who were prepared to speak openly and strongly. But it was also important that there was leadership from below. Community groups and citizens and so on. And then the fourth ingredient was that unfortunately or realistically, human beings only really seem to change when there is a crisis or when major dramatic things happen. So looking back from 2040— there were some really significant crises. Extreme weather events like major fires in the United States or major flooding in India. And it was the way in which people reacted those which made a difference…It's important to recognize we're already at a point where to be honest, bad things will happen. That's already locked in. So there needs to be enormous work to strengthen adaptation and resilience. Just one example would be the situation in the Pacific Islands or in low lying areas of India or Bangladesh. It's going to be pretty bad and we have to think in advance now about how to address those challenges in a fair and just and compassionate way. That has to be part of the hopeful vision as well" (Wiseman, 2017).

   5.1.2.   Recommendations for Universities

   As expressed in Figure 3 on page 17 of the results section, students have mixed responses as to how well they feel their environmental studies classes are preparing them for the information they receive. Although some students feel empowered and ready to take action after class, most

do not. In response to this problem, Professor Kathryn Williams said, "I think we need to find strategies that allow us to talk about the emotional dimensions of these problems in a safe way. I think we've got to find ways to bring conversations about what we love and what we value into the public domain and also conversations about compassion and recognizing the human and non-human suffering that's occurring at the moment" (Williams, 2017).

She recognizes that the "first semester if they haven't studied environmental studies before, it's crushing…So it would be interesting to reflect on how we deal with that. I suppose we do it partly by trying to frame this course in terms of hope... I think part of what we try to do is emphasize in the program a couple of ideals. One is about community and this being a learning community and the support that we provide for each other. Another thing is to try to use fun in the learning so that students are experiencing that. And I guess the other thing is really putting an emphasis on the development of actual skills…we really emphasize that students need to choose subjects each semester that are skills focused so they can really build up not just those generic skills of being able to read and research and critique, but also those practice oriented skills around designing or GPS mapping…all those various things that end up contributing to solutions" (Williams, 2017).

5.1.3. *Recommendations for Students*

One of the most inspiring ways that I saw students taking their wellbeing into their own hands was through the creation of a new Grievance Collective at the University of Melbourne. It was specifically created in response to the need for more attention to the care of student activists and those involved with the university Enviro Collective. At the moment they are working on bringing a Conflict Resolution Training to the university which has a limited number of spots but will be open to all interested students.

In establishing of the Grievance Collective, the student founders are "hoping to achieve a way of effectively supporting and valuing each other both as people and as activists undertaking often really challenging (mentally, emotionally, and morally) work. We want to create an alternative way of relating to one another as a group that tries to recognize everyone's worth and work through conflict so we can all grow and be happy people and campaigners!" (Lucy, 2017). In this description Lucy ties in ideas of community connection and of the power of conversation which are both things that all university students could benefit from more of, whether or not they consider themselves activists.

5.1.4. Recommendations for Environmental and Activist Organizations

Although eco-anxiety can be experienced by all people, in terms of people it impacts indirectly, activists often seem to suffer most. This idea is explained by John Wiseman who said, "Certainly over the last 5 or 6 years there's been a lot more writing and research and work done which has highlighted the extent to which there's a particularly intense version of this amongst people who are closely involved with the issues…There's increasing evidence about the challenges and emotional distress facing those people and therefore the need to address that quite systematically. And the need for an increasing number of programs that allow people to debrief, to talk with other people" (Wiseman, 2017).

The community organizer and Deakin graduate shared her own experiences with this. She said, "I think the mental health impacts of being an activist are hugely underestimated. I was coming back from a road trip the other day and literally four of my friends and I just had a big heart to heart and realized that we all are experiencing depression or anxiety in relation to climate change. We're all suffering. Organizations (like environmental non-profits and activist groups) might safeguard for burnout but they don't for mental health impacts. There should be psychologists and counselors available. I think it's because I've had a rough run of it and have felt really isolated. I've been in Melbourne for three years, and it's only now in the last six months or year have I actually had relationships strong enough to feel safe to speak about that kind of stuff and with a lot of people I do mask it" (Anonymous 1, 2017)

Psychologist Carol Ride mentioned the exact same thing. She said, "One of the therapeutic activities our Psychology for a Safe Climate group uses is providing groups for people to others. We also try to influence organizations to make a space for people to talk together. Because even people who are climate activists in organizations don't necessarily talk about how they feel. And so we advocate that organizations provide space for people to talk together about how they feel about the issues – maybe with some support from a therapist or a psychologist or someone with some skills in facilitating group discussion. So that's more on the group level" (Ride, 2017).

There is clearly a need for organizations to adopt programs such as these. Although I understand that the budgets of environmental organizations are often tight, we as a society cannot afford to allow our activists and people who are fighting climate change on the front lines to suffer in ways that keep them from doing the best work they can.

5.1.5. *Recommendations for Psychological Professionals*

Carol Ride explains that one of the main techniques she uses in her climate grief workshops is art therapy. She says, "we use art therapy to give people a chance to express their feelings. Art materials enable people to draw on the unconscious so they don't have to articulate their feelings initially. They are given prompts to draw something that expresses feelings or experiences from within and then they get a chance to talk about what it means to them." She emphasizes that this is always done in groups so that "it also gives them a chance to express themselves in a group with other people and they hear that they're not alone—and that is extraordinarily important. People comment on that over and over again – how significant it is to talk about how they feel, how they experience being listened to and they get to do that in a group of people whom they discover feel similarly. And that has been really therapeutic for people" (Ride, 2017).

Ride also recommends that psychologists help patients and activists develop mindful self-compassion. She says mindful self-compassion "is a whole realm that is developing in psychology" (Ride, 2017). She explains that the goal is to "help people realize how uncompassionate they are to themselves…and how they need to treat themselves in the same way as they would in a loving way to a friend. It's a very helpful way for climate activists to realize how they're driving themselves so hard and not caring for themselves enough. I think it's a very useful way for people to think about what they're doing and that they need to take more time out for themselves. And of course it can entail a whole lot of ways for looking after oneself, like not doing any climate work on the weekends, or not being on your gadget at bedtime…Just lots of things that they already know" (Ride, 2017). She thinks psychologists don't always need to tell clients the specifics of self-care because once people "start thinking about caring for [themselves] from a self-compassionate perspective it becomes evident to them what they need to do differently" (Ride, 2017).

Along we cultivating compassion for ourselves, we also need to focus how to make peace with our so-called 'negative' emotions. My point with this research was not to teach people how to get rid of their eco-anxiety, but how to actually do a deep personal analysis of how it's coming up for them and then to learn from that. It is undeniable that we are in the midst of an ecological crisis and feelings of grief, fear, anger, and anxiety are perfectly logical responses to that. As transpersonal counsellor Paulina Howfield said to me, "It's not about eradicating anxiety but about letting it guide us. Anxiety is a great teacher if we use it that way" (Howfield, 2017). What

really matters is how we react to these emotions and we allow them to guide us into the next chapter of human history.

5.2. Recommendations for Further Research

My recommendation for further research is based my survey responses to the question 'If you have taken classes related to environmental science or climate change: How well do your classes help you psychologically process the information you receive?" as well as the *Climate Change in Academia* and *Recommendations for Universities* portions of this paper. I think it would be really interesting to ask that question of a much wider audience than I was able to; and then to also ask all respondents to provide detailed feedback about why they responded the way they did. That information could then be used to design curricula based around the psychological needs of environmental studies and environmental science students. If we expect these students to fully engage with the material they learn in classes for their majors—and thus be able to take action in response to it—we need to provide them with the tools and learning material that will enable them to do so.

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List of Interviewees

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Anonymous 2. (2017). Research Fellow and Postdoc at the University of Melbourne. Personal communication via face-to-face interview, 20 April 2017.

Bieg, A. (2017). 20-year-old employee at the Food Co-op at the University of Melbourne. Personal communication via face-to-face interview, 13 April 2017.

Campbell, S. (2017). Researcher at the University of Melbourne and recent postgraduate of the London School of Economics and Political Science. Personal communication via face-to-face interview. 27 April, 2017.

Darcy. (2017). Recent graduate of the University of Melbourne. Personal communication via face-to-face interview. 11 April 2017.

Howfield, P. (2017). Transpersonal Counsellor, and Holistic Integrative Arts Therapist. Personal communication via phone interview. 28 April 2017.

Kudra. (2017) 1st year student at the University of Melbourne. Personal communication via face-to-face interview. 3 April 2017.

Lucy. (2017). 4th year student at the University of Melbourne, double majoring in Criminology and English Literature. Personal communication via face-to-face interview. 12 April 2017.

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Simpson, C. (2017). 3rd year student at the University of Melbourne, pursing a Bachelor of Science in Geology. Personal communication via face-to-face interview. 28 April 2017.

Stanley, J. (2017). Principle Research Fellow – Urban Social Resilience at the Melbourne Sustainable Society Institute. Personal communication via face-to-face interview. 10 April 2017.

Williams, K. (2017). Works in the field of environmental psychology at the University of Melbourne and leads the Master of Environment, a large interdisciplinary program in

environment and sustainability. Personal communication via face-to-face interview. 20 April 2017.

Wiseman, J. (2017). Deputy Director of the Melbourne Sustainable Society Institute, University of Melbourne, Professorial Fellow, Melbourne School of Global and Population Health, and Fellow at the Centre for Policy Development. Personal communication via face-to-face interview. 27 April 2017.

Appendix A: Student Survey Questions

1. Age:

2. Gender:

3. University and Major/Primary Field of Study:

4. What is your overall stress/anxiety level on a scale of 1-5? (1=Very Low, 2=Low, 3=Moderate, 4=High, 5=Very High)?

   a. What are the main causes for your general stress and anxiety?

5. What is your level of stress/anxiety related to climate change and the state of the world on a scale of 1-5? (1=Very Low, 2=Low, 3=Moderate, 4=High, 5=Very High)?

   a. What specifically about climate change and the state of the world is stressing you?

6. If you have taken classes related to environmental science or climate change (otherwise move to question 7): How well do your classes help you psychologically process the information you receive? (1=Very poorly – I end up feeling depressed and distressed after my classes, 2=Poorly, 3=Moderately Well, 4=Well, 5=Very Well – I feel alert, motivated, and empowered to take action after my classes)

   a. Elaborate if you wish.

7. How do you personally cope with stress and anxiety?

   a. What do you do and where do you go?

   b. Who are the main people you go to for support?

8. How important is connecting to nature to your mental health? (1=Not at all important, 3=Moderately Important, 5=Very Important)

   a. Elaborate on this if you wish

9. How would you like to see your classes and the culture of your university change in order to improve levels of stress and anxiety among students?

10. If you would like to receive a tips sheet (based on the information I collect from these surveys and from interviews with other students and staff) please put your email address in the box below. Thanks so much for your help!

Appendix B: Sample Student Interview Questions

Name:

How you would like to be described in the final report (full name, first name only, anonymous, etc.):

Age:

Year at University:

Major/Primary field of study:

1. Knowing that the early 20s can be a very a stressful time and that the amount of work and overall pace of life in a university setting can definitely exacerbate that… How would you describe your general level of stress or anxiety and what do you think the main causes are?

2. How would you describe your level of stress and anxiety related to the state of the world and climate change? How do you feel about the way things are going? What are some of your emotions?
   a. What specifically is stressing you?

3. How does this compare to the stress levels of your family, friends, and/or peers in general?

4. How do you believe that your emotions either influence or are influenced by those of your peers?

5. What role do you believe your classes play in your perceptions of the state of the world/climate change?
   a. Do classes emotionally or physiologically prepare students? Do they talk about the fact that climate change could be traumatic?

6. What role do you believe the media plays in your perceptions of the state of the world/climate change?

7. Do you feel that a connection to nature is related to mental health and psychological resilience? How important is it to you?
   a. How do you incorporate nature connection into your own life?
   b. How do you feel when connecting with nature and how long does that last?

8. How much power (or lack of power) do you feel like you have over your emotions?

9. How much power (or lack of power) do you feel like you have over the state of the world/climate change?

    a. If you feel powerful, what actions do you take in order to exercise that power?

10. How do you cope with stress and anxiety regarding the state of the world/climate change?

    a. Who are your main support people and how do they react when you share how you feel about the state of the world?

11. What would be your top 3 tips for someone else your age dealing with anxiety about the state of the world?

Appendix C: Sample Lecturer/Researcher Interview Questions

Name:

How you would like to be described in the final report (full name, first name only, anonymous, title/qualifications, etc.):

1. Before I just introduced it, had you ever heard the term eco-anxiety?
2. Do you ever experience eco-anxiety?
    a. How do your experiences compare to those of your colleagues, family, or friends?
3. Just based on what you've seen in others or in yourself do you think there is a relationship between mental health and planetary health?
4. Are the psychological impacts of climate change ever addressed in your field? How so?
5. What role do you think emotions play in political and social decision making? How can we work to help create a world in which people have healthy emotional reactions to climate change that motivate them to take action?
6. What is your vision for the future of the fight against climate change, at both the university level on a larger scale?

Appendix D: Sample Psychological Professional Interview Questions

Name:

How you would like to be described in the final report (full name, first name only, anonymous, title/qualifications, etc.):

1. Have you heard of the term eco-anxiety? Do you know any other phrases or terms that explain the same idea?
2. Do you believe there's a relationship between planetary health and mental health?
3. Have you personally experienced eco-anxiety? How has it manifested for you?
    a. How do your experiences with eco-anxiety compare to those of colleagues, friends, family?
4. Have you encountered patients/clients with eco-anxiety? Do you believe it's being addressed in your field?
5. What are some good coping mechanism for eco-anxiety? How can we help cultivate healthy emotional responses to climate change?
6. What is your vision for the future of the fight against climate change and how to see the role of mental health and emotional wellbeing evolving within it?