

EXISTENTIAL DREAD ON PRO-ENVIRONMENTAL BEHAVIOR IN YOUNG ADULTS

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ABSTRACT: The effects of climate change encompass more than its ramifications on the natural environment. As we venture further into modernity that is drastically different from the last 150 years, it's become apparent that the effects of changing environments on the human psyche are worth studying as social scientists. Specifically, it's become important to analyze the effects of climate change discourse and action on the mental health of young adults. Young adults are faced with a constantly changing social landscape that appears to compound the effects of changes in the global natural environment. Soon, young adults will have most of the decision-making power in the United States. This paper analyzes the current mental health landscape of young adults, the classification of climate change as ambiguous loss associated with existential dread, and the effects of hope and coping mechanisms on decision making. The proposed study aims to determine a threshold of existential dread, classified as ecoanxiety, that would elicit pro-environmental behavior from young adults. The anticipated outcome of this study is a contribution towards a novel theoretical framework aimed at understanding the psychological load that climate change and other existential concerns have on the developing psyche of future generations.

Introduction

Environmental engagement encapsulates a growing category of human relations. Societal deliberations concerning climate change are especially potent given the pressure of a countdown to no return that the Intergovernmental Panel on Climate Change (IPCC) has warned us is imminent (Intergovernmental Panel on Climate Change [IPCC], 2021b). Given the time frame, it is crucial to include young adults' perspectives and potential action to sustain any changes made. There are several studies that indicate young people's interest in global problems and resulting intense negative emotions evoke inactivity in environmental engagement efforts (American Psychological Association, 2017; Bostrom et al., 2020; Clayton, 2020; Maartensson & Loi, 2021; Ojala, 2012b). Many researchers, including myself, assume it is because the psychological load of climate change, with its emotional and physical distance and pervasive, ambiguous loss, far outweighs the immediate gratification

of any pro-environmental action an individual can take.

Studies of pro-environmental behavior post-Kyoto Protocol (1997) have focused mainly on adults. However, common themes have appeared among the factors that seem to be important for further examining pro-environmental behavior - the main factors being age and gender, educational level, social influence, and habits (Ojala 2012b). According to Pew Research Surveys and the current literature on climate change perspectives, recent data shows that climate change concerns have become a bipartisan issue in the United States (Pew Research Center, 2021). The effects of this political perspective change have significant implications for positive climate initiatives given the advances of technology, the urgent necessity of climate-friendly policies and infrastructure, and the younger generations' level of knowledge.

For the sake of my proposed study, it is important to define the terms *ecoanxiety*, *existential dread*, and *pro-environmental engagement*. *Ecoanxiety* is identified as an outcome of environmental awareness and the subsequent emotional reactions to ecological decline. It's characterized by feelings of frustration, despair, powerlessness, and worry and made distinct by the type of ambiguous loss that Glenn Albrecht identifies as *solastalgia* (Albrecht et al., 2007). Existential dread is the generalized category from which *ecoanxiety* draws its emotional power. The crisis of existential dread is universally experienced and stems from an individual's confrontation with the ultimate concerns of humanity: death, freedom/responsibility, meaninglessness, and isolation (Budziszewska & Jonsson, 2021). *Pro-environmental behavior* is used interchangeably in this essay with *pro-environmental engagement* and is defined as the willingness to perform actions, partner with organizations, and promote policies that promote positive climate change.

Based on these readings and my own understanding of anthropogenic climate change, my research question aims to inspect the relationship between existential dread, namely from the dimension of ecoanxiety, and young adults' participation in pro-environmental engagement. The high threat perception of climate change is experienced daily by 36% of Americans and the "mobilization of [young people] has become the symbol of new climate change awareness," (Budziszewska & Jonsson, 2021). This is leading to an increasing interest in the effects of ecoanxiety and its impact on the decision-making behavior of the generation who will be responsible for and experience the first major effects of climate change.

Research Questions

The purpose of this study is to examine young adults' willingness to engage in pro-environmental behavior. Digital natives, young adults aged 18-26, take in five times more information in one day today than people did

in 1986 – a finding synthesized by Daniel J. Levitin's *The Organized Mind: Thinking Straight in the Age of Information Overload* (2014). More information is not always a good thing, and too much exposure to knowledge and information can increase the likelihood of developing depression and anxiety – components of an oncoming existential crisis (van Bruggen et al., 2014). My research questions encompass exposure to climate change science, the benefits and drawbacks of consistent and concentrated exposure, and effective methods of coping. First, what are the effects, if any, of increased exposure to climate change-elicited existential dread on young adults' participation in pro-environmental behavior? Subsequently, what are the benefits and drawbacks of increased and prolonged exposure of ecoanxiety on young adults? Lastly, what are effective methods of reframing existential dread and ecoanxiety to more constructive forms of coping?

Thesis

I argue that examining the carrying threshold for existential dread via measurements of ecoanxiety in young adults in a social setting will increase environmental engagement. Young adults are primed for complex problem solving and abstract communication thanks to the variety of issues they're exposed to by the internet and social media. By placing them in a study with a peer focus group, I anticipate that increased environmental engagement will emerge through the psychological pressure of imminent catastrophic climate change and a social consensus on a desirable outcome. I explore the relationship between young adults with others their age because the power differential is similar enough to imply a multitude of shared experiences (Corner et al., 2015). Studies show that youth of today are anxious about their collective futures and are more likely to experience psychological and physical health impairments due to climate change (Wu et al., 2020), promoting an increased motivation to find viable pro-environmental solutions. Validation of the findings of this study will

likely improve our understanding of the holistic well-being of the planet and humanity in the long-term, as well.

Methodology

There is very little literary reference to the relationship between the ability to correlate existential dread and ecoanxiety with proactive environmental engagement. For my proposed study, drawing on community college students, university students, and full-time employed young adults between the ages of 18-26 is the ideal focus group for the study. Any funding provided as an incentive for the study should go towards the applicants who make it through both trials and the post-study evaluation.

Recruitment for the first section at these locations appears to provide a healthy pool of applicants with varied political, social, and economic backgrounds. Those who respond to recruitment and fall into recruitment criteria of being of age and inclined to participate are tasked with responding to a survey questionnaire evaluating their base psychological perception of climate change and well-known pro-climate initiatives. The survey is a mix of quantitative Likert-scale questions gauging their existential dread and ecoanxiety threshold prior to the intervention. The survey questions are modeled after Budziszewska & Jonsson's 2021 study of Existential Perspectives on Climate Change. Qualitative questions to assess how each participant responds to stress and copes with emotions addressing high-risk, high-stakes issues are also included. These qualitative assessments are designed to help researchers identify common responses to crisis situations among participants.

Those who successfully completed the survey were recruited to meet in person with the other participants to attend an educational seminar delivered by a climate scientist and activist. The lecture would run through the Representative Concentration Pathways (RCP) scenarios provided by the IPCC to broaden the understanding of the consequences

surrounding the lack of pro-climate action (Intergovernmental Panel on Climate Change [IPCC], 2021a). Following this, the scientist would also provide progress notes on how G30 countries are effectively combatting climate change using a mix of individual/community responses, political responses, scientific responses, and business responses. The purpose of this portion is to test whether the holistic representation of information would alleviate the pressure of ecoanxiety on young adults' perception of climate issues on a global scale.

A peer focus group is key in this study to test whether informal social discourse would allow for a more realistic representation of community engagement among young adults (Ojala, 2012a). Researchers would observe and transcribe the post-seminar discussion without informing the participants and code for positive and negative reappraisal following the format of (Ojala, 2012b). The participants would then take another similar survey three days post discussion evaluating their willingness to engage in action pathways related to the responses provided during the intervention. Their answers would be cross-validated with the coding of the transcription for internal validity and accuracy.

Preview of the Research & Methodology

Mental Health of Young Adults

It is plain to see that in our hyper-connected society, young people are gravely affected by the onslaught of high-risk, high-stakes issues that compound yearly. The issue of climate change is significantly distinct in its global pervasiveness and the lack of manifestation on a personal level (Cianconi et al., 2020). Nonetheless, thanks to social media and the Internet, young people are exposed to climate and other catastrophes more quickly. The salience of social issues tends to magnify the psychological effects of these catastrophes in young adults who will live with the consequences of such issues. The behavioral manifestations because of these issues include a lack of willingness to have children, the

politicization of any and every social issue, and a loss of trust in social institutions (Clayton, 2020).

The literature on young adults' responses to high-risk, high-stakes issues is insufficient surrounding climate change and pro-environmental behavior. This can be explained, in part, by the current coping mechanisms available to young adults and the rapidity with which their environments are subject to change. The most common mental health responses to the current socio-cultural and socio-political climate are elevated levels of stress, PTSD (notably present in climate refugees), heightened anxiety, and depression (American Psychological Association, 2017). Not only does climate change elicit these mental health responses, but those who are already predisposed to mental health vulnerabilities run the risk of exacerbation of these ailments due to the impact climate change has on social factors and the potential for destruction of young adults' lived environments (Majeed & Lee, 2017).

According to the climate science body of knowledge, as technology innovates it becomes more efficient and the current trajectory reveals that though humans are emitting more carbon than in the 20th century, our rate of drawdown is also increasing. This partial picture is harmful to young adults because the knowledge that could promote hope in this generation is commonly omitted in public discourse, leading to misconceptions concerning the efficacy of pro-environmental initiatives and climate technology. The distress, depression, and ecoanxiety experienced by young adults due to climate change is rooted in the helplessness and demoralization that characterize existential dread. The mental health of young adults is vulnerable, susceptible to the public discourse which is not always scientifically valid and will have far-reaching impacts on the political and cultural state of the world.

Existential Dread & Ecoanxiety

Van Bruggen et al. (2014) describe existential anxiety, a component of existential dread, as an expression of being occupied with ultimate concerns such as death, meaninglessness, and fundamental loneliness. And, according to Ojala (2012b), the research indicates that learning about global problems can trigger the intense negative emotions associated with existential dread and ecoanxiety. One can assume that these ultimate concerns and feelings of worry, helplessness and hopelessness are a necessary aspect of constructively dealing with climate change. Behavioral responses amount to either acceptance-actions or avoidant-actions and are related to feelings of agency or powerlessness.

Studies show that young adults are interested in and worry about global issues more so than older generations, but their lifestyles are at the same rate of sustainability as older generations (Ojala & Bengtsson, 2018). This can lead to a perception of meaninglessness among young adults, who may compare their contributions and lifestyle sacrifices to those of older generations and see no significant change or difference. A comparison at this level negates any optimism they may have concerning their own individual actions – it is this perception that promotes ecoanxiety in young adults.

Coping mechanisms measured by Ojala (2012b) emphasized that differences in coping strategies represented different active outcomes in a Swedish study of young people. Clayton and Karazsia (2020) also highlight in a recent study that experiencing climate change is associated with more than one type of response. If existential dread and ecoanxiety are experienced by young people, can positive reappraisal of climate change elicit effective action? Reframing the worry and powerlessness when thinking about climate change is only possible when the outcome is achievable and attainable, thereby promoting a constructive transition to hope instead of despair.

Hope & Pro-active, Pro-environment Engagement

Hope as a concept is complex but it is evident that it is the polarized concept of existential dread. The most relevant psychological theory about hope proposes three different components of goals, pathway thinking, and agency thinking (Ojala, 2012a). Hope arises when a positive goal is felt as attainable – how, then, does hope relate to motivation? People with high levels of hope are more proactive about using their knowledge and information to make better decisions.

Young people whose coping strategies were *meaning-focused* were more common in promoting hope, while emotion and problem-focused strategies were used more to regulate worry according to Ojala (2012b). It should be noted that there is a significant difference between regulating worry and promoting hope – it is comparable to running *away* from something versus running *toward* it. In one study, all significant correlations of hope and proactive environmental engagement were reported positive, so one could rightly assume that the relationship between ecoanxiety, existential dread, and hope regarding pro-environmental engagement indicates an ability for young adults to constructively integrate climate change into their worldview. The main distinction proposed is, again, in the differences between hope grounded in climate denial and hope grounded in more constructive forms of coping.

Measuring Climate Anxiety & Contributions of a Social Context

It is recognized in the social science community, particularly within the field of psychology, that a quantitative approach to measuring existential perspectives is controversial. “Some eschew the use of standardized measurements in general, and regard these measurements as being in opposition to the flexibility and inherent holistic character of human functioning,” according to van Bruggen et al (2014). This disagreement

can be contributed to the nature of social science research and the purported goal of the study in question. The literature suggests that one of the few limitations in measuring existential emotions is its lack of replication.

One successful study, Clayton & Karazsia (2020), successfully measured the psychological impacts of climate change. While Bruggen et al. (2014) reviewed instruments measuring existential anxiety, there are limitations to both studies relevant to my proposed study which is that neither correlates climate anxiety to pro-environmental behavior, and the instruments found to measure existential anxiety were lacking in depth and scope. Likewise, in Budziszewska & Jonsson (2021), the researchers tested and examined the relationship between climate anxiety and climate action, however, it was focused on the application of this knowledge within a psychotherapy context and recognized that an informal, social context would go further in evaluating the collective movements of young people’s proactive engagement.

Measuring ecoanxiety as an aspect of existential dread serves a purpose in the greater social context because climate anxiety underlines the magnitude of the high-stakes climate situation and motivates new forms of cultural discourse to affect social movements, policies, and infrastructure development (Budziszewska & Jonsson, 2021). The measures that limit risks from climate change may also contribute to the reduction of existing inequalities because high-risk issues especially impact the disadvantaged in society (Botzen et al., 2021). I anticipate that understanding the social context of high-risk threats will provide grounded paths of action towards young adults’ engagement in adapting, mitigating, and responding to high-risk, high-stakes issues in the future.

Emotional Considerations in Decision Making and Behavior

Accepting or denying the reality of climate change and emotional coping with threatening

information is the cornerstone of reframing ecoanxiety towards productive action. Young adults are less likely to be fatalistic about combating climate change, and most appear to perceive climate change to be a serious but solvable problem (Corner et al., 2015). In the same study, it was mentioned that constructive hope was positively associated with pro-environmental behavior. Managing risk perception, behavioral willingness, and constructive hope in pro-environmental behavior revealed that people are most willing to change their behavior when they feel hopeful about the outcome (Maartensson & Loi, 2021). When considering the decision-making capability of young adults, it appears that the majority of emotional consideration and risk perception lies in the immediacy and efficacy of climate-friendly initiatives.

Limitations & Possibilities for Future Research

The potential limitations for this study are the possibility that participants would fall into mental patterns that imitate other participants, rather than answering true to their own ideals and beliefs. This could potentially be coded supplementary to the intervention and would need to be cross-referenced with post discussion survey results. Since one hypothesis is that pro-environmental engagement is influenced by social context, this is a necessary preparation for this proposed study. For ethical protection, a liability waiver detailing the potential mental and psychological ramifications of an intervention that tests for levels of anxiety and pre-existing pathology would need to be signed before any research takes place.

Considerations for future research would first be a longitudinal survey study following the participants and tracking their choices regarding whether they engaged with environmental activism and, if so, to what extent. Surveys should also account for inactivity and the self-reported explanations for doing so. Also, prolonged exposure to existential crises is a

cause of significant traumatic stress. Addressing the pre-existing, natural context of existential dread in a non-experimental observation of language surrounding climate change on social media platforms, recorded interviews, and/or the inclusion of further literature review would further validate the outcome of this proposed study. Alternatively, this research is based on the ideas presented by Attitude-Behavior Gap which occurs when individuals perform actions that contradict or disregard their values (Redondo & Puelles, 2016). Much of the literature surrounding the attitude-behavior gap is in reference to environmentally-focused behavior, however, there is little surrounding the psychological impact of the attitude-behavior gap and what elicits this dissonance specifically for younger generations. Continued research into the attitude-behavior gap and existential dread would benefit social psychologists as technology and society innovate for altered climates, lifestyles, and institutional structures.

References

- Albrecht, G., Sartore, G.-M., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., Stain, H., Tonna, A., & Pollard, G. (2007). Solastalgia: The distress caused by environmental change. *Australasian Psychiatry*, 15(1_suppl), S95–S98. <https://doi.org/10.1080/10398560701701288>
- American Psychological Association. (2017, March 29). Climate change's toll on mental health. <https://www.apa.org>. <https://www.apa.org/news/press/releases/2017/03/climate-mental-health>
- Bostrom, A., Böhm, G., Hayes, A. L., & O'Connor, R. E. (2020). Credible threat: Perceptions of pandemic coronavirus, climate change and the morality and management of global risks. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.578562>
- Botzen, W., Duijndam, S., & van Beukering, P. (2021). Lessons for climate policy from behavioral biases towards covid-19 and climate change risks. *World Development*, 137, 105214. <https://doi.org/10.1016/j.worlddev.2020.105214>

- Bovier, P. A., Chamot, E., & Perneger, T. V. (2004). Perceived stress, internal resources, and social support as determinants of mental health among young adults. *Quality of Life Research*, 13(1), 161–170. <https://doi.org/10.1023/b:qure.0000015288.43768.e4>
- Budziszewska, M., & Jonsson, S. (2021). From climate anxiety to climate action: An existential perspective on climate change concerns within psychotherapy. *Journal of Humanistic Psychology*, 002216782199324. <https://doi.org/10.1177/0022167821993243>
- Cianconi, P., Betrò, S., & Janiri, L. (2020). The impact of climate change on mental health: A systematic descriptive review. *Frontiers in Psychiatry*, 11. <https://doi.org/10.3389/fpsyt.2020.00074>
- Clayton, S. (2020). Climate anxiety: Psychological responses to climate change. *Journal of Anxiety Disorders*, 74, 102263. <https://doi.org/10.1016/j.janxdis.2020.102263>
- Clayton, S., & Karazsia, B. T. (2020). Development and validation of a measure of climate change anxiety. *Journal of Environmental Psychology*, 69, 101434. <https://doi.org/10.1016/j.jenvp.2020.101434>
- Clayton, S., Manning, C., Krygsmann, K., & Speiser, M. (2017). Mental health and our changing climate: impacts, implications, and guidance. *American Psychological Association, and ecoAmerica*. <https://www.apa.org/news/press/releases/2017/03/mental-health-climate.pdf>
- Corner, A., Roberts, O., Chiari, S., Völler, S., Mayrhuber, E. S., Mandl, S., & Monson, K. (2015). How do young people engage with climate change? the role of knowledge, values, message framing, and trusted communicators. *WIREs Climate Change*, 6(5), 523–534. <https://doi.org/10.1002/wcc.353>
- de Ridder, D. D., Lensvelt-Mulders, G., Finkenauer, C., Stok, F., & Baumeister, R. F. (2011). Taking stock of self-control. *Personality and Social Psychology Review*, 16(1), 76–99. <https://doi.org/10.1177/10888683111418749>
- Farjam, M., Nikolaychuk, O., & Bravo, G. (2019). Experimental evidence of an environmental attitude-behavior gap in high-cost situations. *Ecological Economics*, 166, 106434. <https://doi.org/10.1016/j.ecolecon.2019.106434>
- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, E. R., Mayall, E. E., Wray, B., Mellor, C., & van Susteren, L. (2021). Young people’s voices on climate anxiety, government betrayal and moral injury: A global phenomenon. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3918955>
- Intergovernmental Panel on Climate Change. (2021a). Future climate change, risks and impacts (Summary for policymakers) [Report]. <https://www.ipcc.ch/report/ar6/wg2/>
- Intergovernmental Panel on Climate Change. (2021b, August 9). Climate change widespread, rapid, and intensifying – ipcc — ipcc. IPCC. <https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/>
- Karp, D. (1996). Values and their effect on pro-environmental behavior. *Environment and Behavior*, 28(1), 111–133. <https://doi.org/10.1177/0013916596281006>
- Maartensson, H., & Loi, N. M. (2021). Exploring the relationships between risk perception, behavioural willingness, and constructive hope in pro-environmental behaviour. *Environmental Education Research*, 1–14. <https://doi.org/10.1080/13504622.2021.2015295>
- Majeed, H., & Lee, J. (2017). The impact of climate change on youth depression and mental health. *The Lancet Planetary Health*, 1(3), e94–e95. [https://doi.org/10.1016/s2542-5196\(17\)30045-1](https://doi.org/10.1016/s2542-5196(17)30045-1)
- Mercure, J., Salas, P., Vercoulen, P., Semieniuk, G., Lam, A., Pollitt, H., Holden, P. B., Vakilifard, N., Chewpreecha, U., Edwards, N. R., & Vinales, J. E. (2021). Reframing incentives for climate policy action. *Nature Energy*. <https://doi.org/10.1038/s41560-021-00934-2>
- Ojala, M. (2012a). Hope and climate change: The importance of hope for environmental engagement among young people. *Environmental Education Research*, 18(5), 625–642. <https://doi.org/10.1080/13504622.2011.637157>
- Ojala, M. (2012b). Regulating worry, promoting hope: How do children, adolescents, and young adults cope with climate change? *International Journal of Environmental & Science Education*, 7(4), 537–561. <https://eric.ed.gov/?id=EJ997146>

- Ojala, M., & Bengtsson, H. (2018). Young people's coping strategies concerning climate change: Relations to perceived communication with parents and friends and proenvironmental behavior. *Environment and Behavior*, 51(8), 907–935. <https://doi.org/10.1177/0013916518763894>
- Pew Research Center. (2021). In response to climate change, citizens in advanced economies are willing to alter how they live and work [Report]. <https://www.pewresearch.org/global/2021/09/14/in-response-to-climate-change-citizens-in-advanced-economies-are-willing-to-alter-how-they-live-and-work/>
- Redondo, I., & Puelles, M. (2016). The connection between environmental attitude–behavior gap and other individual inconsistencies: A call for strengthening self-control. *International Research in Geographical and Environmental Education*, 26(2), 107–120. <https://doi.org/10.1080/10382046.2016.1235361>
- Resources for the Future. (2020, September 23). Climate insights 2020: Policies and politics. <https://www.rff.org/publications/reports/climateinsights2020-policies-and-politics/>
- van Bruggen, V., Vos, J., Westerhof, G., Bohlmeijer, E., & Glas, G. (2014). Systematic review of existential anxiety instruments. *Journal of Humanistic Psychology*, 55(2), 173–201. <https://doi.org/10.1177/0022167814542048>
- Wu, J., Snell, G., & Samji, H. (2020). Climate anxiety in young people: A call to action. *The Lancet Planetary Health*, 4(10), e435–e436. [https://doi.org/10.1016/s2542-5196\(20\)30223-0](https://doi.org/10.1016/s2542-5196(20)30223-0)