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Environmental anxiety's role in ecofriendly behaviour

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Table of Contents

- Introduction..... 2
- Background. 4
 - Climate Change..... 4
 - Anxiety 6
 - Youth..... 7
- Theory. 8
- Research question..... 10
- Method..... 10
- Results..... 11
 - Article 1. 11
 - Article 2. 12
 - Article 3. 13
- Discussion. 15
 - Environmental anxiety vectors 15
 - Consequences on behaviour..... 16
 - Promotion of healthy environmental concern 16
 - Answering the Research Question 17
 - Limits..... 18
 - Suggestion for further research..... 19
- Conclusion..... 20
- References. 21

Introduction.

It is quite interesting how a worry that was once considered somehow minor or a fearmongering tactic used exclusively by environmentalist parties and people associated with extremist mindsets has now become a more mainstream fear. In recent years, environmental degradation and its consequences are making its place in people's minds amongst many other fears. This fear has gained a name in some environmental literature. Depending on its gravity, it is sometimes called eco-anxiety, eco-guilt, or environmental grief. This change in mindset on the topic has been materialized by more and more depictions of concern for the environment, end of the world scenarios and so forth in mainstream entertainment media and culture. For instance, in movies like "Don't Look Up" (McKay, 2021) who critique the apathy of media, governments and the public in front of an environmental crisis. The characters in the movie discover a threat to Earth, but no one believes them or takes them seriously despite scientific backing. At the end of the movie, people that remained on Earth and ignored the warnings died, which made people call it a metaphor for our current situation. In fact, the necessity to act against the climate crisis we are facing is also extremely urgent.

Climate change is arguably something that can happen naturally by, for instance, changes in solar cycles patterns (UN, 2022). However, "since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil, and gas" (UN, 2022). The consequences of climate change can be permanent changes to temperature, water level and weather. Biodiversity loss, intensification of natural disasters and rising sea levels are just a few of the crises we will have to deal with now and in the future, according to the last climate reports of the IPCC, which is the Intergovernmental Panel on Climate Change (IPCC, 2022). In face of the problems we will encounter, many measures have been put in place to combat issues related to climate change on an international level, the most recent ones being the Paris Agreement and the UN Sustainability Goals. Through the first one, we are hoping to reduce carbon emissions and therefore global warming and the second one encompasses many other sustainability related goals. However, there are many complaints coming through despite these plans. The goals set by them are said to be unattainable and at the same time not restrictive enough to limit damage to our environment. Some countries, like the United States, also threatened to drop out of the programs completely or dropped out temporarily out of fear of

economic losses due to the emission restrictions (UN, 2021). The climate crisis we are facing therefore needs more attention and harsher measures to combat it (IPCC, 2022). In the press release of the latest IPCC report, the chair of the panel, Hoesung Lee, said “This report is a dire warning about the consequences of inaction,” “It shows that climate change is a grave and mounting threat to our wellbeing and a healthy planet. Our actions today will shape how people adapt and nature responds to increasing climate risks.”

One can only imagine that with a threat like that in the background, people’s psyche can be affected. Additionally, with more and more attention being brought to the topic of climate change, more exposure might increase the level of worry in everyone. If someone is anxious that they might lose their place of residence due to rising sea levels, will they start taking more public transport instead of driving? Will a farmer who notices an increase in forest fires switch to a less wasteful way of watering his crops? Or on the contrary, will he overuse fertilizers to make up for lost profit at the risk of polluting nearby rivers? This environmental anxiety and its effect on people’s environmentally friendly behavior will be the subject of this thesis.

Background.

Climate Change

Climate change is a very popular topic outside of science because of people's very different opinions on it and how to tackle it. Climate change and anthropocentric climate change is a very mediatized topic, and the views people have on it seem to be political. Living as a young person today, you hear about the environment and climate change daily. Just like every other popular topic, it is easy to divide people based on their opinion on this. Some people might decide to antagonize climate change activism as a defense mechanism and others might try to change their habits and not buy a plastic water bottle daily. Climate change and its signaling can cause so many different feelings in different types of people. Since not everyone is living next to an area already affected by a climate borne crisis, or not realizing that they are, media representations of climate change "are a powerful and arguably primary mediator of climate change impacts for most individual" (Swim et al., 2009, p. 91). However, our current type of gathering information about climate catastrophes through media might also cause negatives effects, in fact "Stokols, Misra, Runnerstrom & Hipp (2009) describe 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" (Hickman, 2021).

Despite all the usage of the environment and climate change in the media and political spheres, the fact that climate change is a very real threat is almost completely undisputed by most reputable scientific sources. In fact, according to the latest IPCC report, we are already experiencing a lot of the consequences of decades of human pollution. One of these consequences is the rising of the sea level. This is also not simply a minor issue since "approximately a billion people" are "projected to be at risk from coastal-specific climate hazards in the mid-term (2041-2060) under all scenarios" (IPCC, 2022). People living in coastal areas or on low altitude islands will have to relocate to a different place. The effects will not only affect humans but also the local ecosystems of these specific areas. On top of the sea levels, other major important aspects of our lives are being struck by climate change. The IPCC report shows us that, during the last few decades, our food

production chain has been increasingly negatively impacted by climate change related incidents, be it through ocean acidification or warmer temperatures. Not only food, but the drinkable water supply, which is already scarce for many since approximately 50% of us “are experiencing severe water scarcity for at least one month per year” as a consequence of climatic events. (IPCC 2022). These worrying events are predicted to get increasingly worse every year which gives us more than enough reason to worry about ours and our next generations future. Governments, organisations, and companies have been taking action to try and bring awareness surrounding the issue of pollution to combat climate change. But how much does an average individual really pollute and how much does it contribute to our environment’s destruction?

One popular way that calculate an individual negative input on the environment is to calculate its carbon footprint. A carbon footprint is “is the total amount of greenhouse gases (including carbon dioxide and methane) that are generated by our actions” (The Nature Conservancy, 2022). Our actions include our methods of travelling, or if we travel at all, our heating systems and how much we use them, our food choices and overall consumption of goods. The average household, in the United States, produces 16 tons of carbon emissions in this manner whereas, on a global scale, the average is more around 4 tons. The goal is to get under 2 tons to reduce further damages to our environment. However, according to an article published by Oxfam in 2020 “The richest 10 percent accounted for over half (52 percent) of the emissions added to the atmosphere between 1990 and 2015”. (Oxfam, 2020). We can imagine that as an individual looking into the climate crisis and ways to help, it could be easy to fall into feelings of helplessness when observing the state of this crisis and the perceived little help only one individual can bring. Feelings of betrayal can also rise when comparing your individual carbon footprint to the carbon footprints of companies. From the food we consume to the clothes we wear, everything can be criticised as an environmentally degrading action. For instance, once a beloved household staple, bovine dairy products have been facing a lot of criticism for not being environmentally friendly. Dairy farms cause degradation of local biodiversity, soil quality, pollute the water and especially the air through high production of methane gas (CEAS Consultants, 2020). Our clothes, can also, pollute. To make

leather shoes, chemicals that can pollute, just like the dairy industry, land, air and water (Ethical Consumer, 2022) are needed to treat the materials. Almost everything we consume, buy, eat and wear can pollute. In a time where climate crisis and sustainability are common topics of conversation, stress can easily occur by feelings of guilt for not doing enough for the environment.

Anxiety

Another crisis we experience in recent year is the global rise of mental illness, especially in the youth. A global study in 2021 record a 25% increase in rates of anxiety in the last couple of year, which affect children, teenagers, and young adults disproportionately (Santomauro et al., 2021). Anxiety is most commonly defined as a “future-oriented mood state associated with a sense that events are proceeding in an unpredictable, uncontrollable fashion” (Swim et al., 2009, p.82)

There are many different types of way this fear can materialize in people. Some people experience social anxiety, in this manner they experience irrational fear about social events and no sense of control over them. This may lead people affected by this type of anxiety to avoid anything related to being social, making the problem worse. This starts a process called the cycle of avoidance (Wang, 2017). We could see a parallel between this and the type of anxiety we are examining in this thesis. Eco anxiety, also referred to as “environmental anxiety” (Swim et al., 2009, p.225), has been characterized as obsessive and potentially disabling worry about risks that are actually not significant” (Swim et al., 2009, p.82)

Before it became a term commonly used in environmental and psychological science, its first usage was in relation to the consequences to people’s mental health in the aftermath of disasters such as hurricanes, tornados, tsunamis and so forth. In fact, studies showed that victims of such happenings tend to develop higher levels of stress concerning the climate and the environment. (Swim et al., 2009, p. 79) We can assume that the more climate change starts to affect a larger amount of people directly in their local environment the more eco-anxiety and its consequences will spread.

Youth

In this day and age, young people, teenagers, and young adults, are more exposed to social media and access to the internet. According to an online report on a study conducted in 2021, media use by children and teenagers increased by 17% since 2019 (The Common Sense, 2022). The topic of environmental anxiety is therefore best to be observed in a young audience since the gap between generations is extremely obvious when coming to environmental concerns and usage of different type of medias. The way mental health is treated within communities of different age groups is also very different, as we saw earlier, younger individuals are also most likely to be diagnosed as opposed to their older counterparts. This younger generation has also been more vocal than previous ones, maybe facilitated through social media, and had huge impacts in making their voices heard, especially through the rise to popularity of young activists, such as Greta Thunberg, a Swedish girl who was just 15 years old when she started speaking up. Teenagers around Europe started participating in August 2018 in an incentive that she organized called “Fridays for the Future” to protest against governments and the older generations for enabling a culture of consumerism and pollution (Haugseth & Smepllass, 2022). Another showcase of the younger generations’ rising interest and involvement in environmental matters is the share of young voters for the green-leaning parties which declines with age (Bean, 2007) and the cited interests of these voters. In a recent survey by a French radio station, young French voters said that thinking about environment was one of their main deciding factors when choosing who to vote for coming in second after purchasing power (Vasseur, 2022).

This thesis will therefore be focusing mostly on the effects of the environment on this category of people. Additionally, some of the surveys I will go over in this thesis tried to be global, but we cannot forget the fact that people who can answer the surveys have to have access to the internet, and therefore electricity, which thus excludes the poorer end of this age group. Out of the three articles I will be presenting, two of them are axed on a younger audience while one does not have an age restriction or limitation.

Theory.

The theory used in this thesis will be based mostly on the theory developed by Patchen in 2006, which is a combination of previous theories in the field of psychology which try to predict an individual's behaviour based on "determinants" who influence that person's intention as well as each other. This model underlines the importance of several social-psychological determinants with the main ones being risk appraisal, moral obligation, habits and values. (Patchen, 2006)

Figure 1. A Model of the Determinants of Behavior Relevant to Climate Change

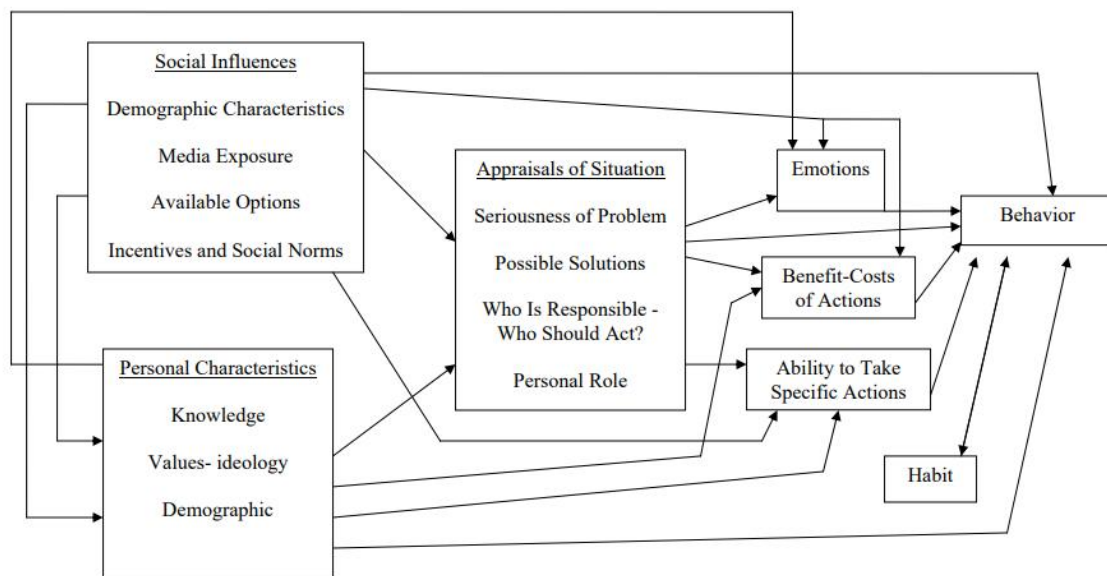


Figure 1. a Model of the Determinants of Behavior Relevant to Climate Change, 2006, by Patchen M.

https://www.columban.jp/upload_files/data/EE0063_AttitudeChange.pdf

This figure shows, according to Patchen, that a "person's environmentally-relevant behavior at any given time is affected most directly by: a) his emotions [...] b) the expected benefits and/or costs of specific actions; c) his perceived ability to take specific types of actions; and d) his habits with respect to various actions". This theory assumes to a certain degree that a person's action are predictable.

We can see that social influences are the strongest of three main influences to a person's actions according to this graph. Social influence which includes demographic characteristics, media exposure, available options and incentives and

social norms can influence a person's characteristics as well as their appraisal of situation.

If we take an example to fit in this graph, we could take the decision to stop consuming dairy since we have seen earlier that consuming dairy is very polluting. In the category of social influences, depending on our subject's age, he might have been more exposed to pro-dairy advertisements or in the opposite case, to more vegan friendly options. If he lives in a city where grocery stores or specialty stores have plenty of dairy free options, he might choose to buy oat milk instead of cows' milk. His personal characteristics will be influenced by the availability of information for him, changing his knowledge, maybe values. In the appraisal of the situation phase, depending on how the media portrayed the problem of dairy, he might change his views on the seriousness of the problem. If he sees the environmental crisis as something overwhelmingly complicated that only politicians can fix, it will also affect his sense of responsibility. Almost at the final phase of the behaviour making scheme, emotions will come into play. Additionally, if the soy milk is more expensive to buy than dairy, he might reconsider switching. Or he might drink coffee exclusively at his workplace which does not offer any dairy-free alternatives. With all these factors in mind and adding his usual habits to it, we can try to determine how our subject will act, whether he will choose to do an environmentally friendly action or not.

Environmental anxiety in this theoretical model will have impacts at different levels. The most affected areas will be the appraisal of situation and emotion. In extreme cases, where anxiety becomes handicapping, the ability to take specific actions can also be one of the main factors.

Research question.

Having all these different facts now laid out and knowing the importance of them allows us to form a research question to further examine these topics and bring out similarities to find an answer to it. This thesis will therefore be focusing on what role environmental anxiety plays in ecofriendly behaviour.

Method.

For this thesis, I have chosen the method of literature review to analyze and discuss the problem of environmental anxiety and attempt to answer the research question. There have been several studies that touch upon the subject of environmental anxiety and its consequences, especially in younger people. A practical example that would be useful to bring additional or newer information on this topic would have been difficult to organize considering the knowledge required in many different fields of social sciences, psychology and so forth. A literature review can therefore analyze previous studies, discuss their findings and bring insight into what should be further researched to solve the issue presented. (Booth et al., 2021)

Three articles will be presented for this literature review. The choice was made by a selection based on how recent the articles were and on what age the target demographic was. To find these articles, I mostly used google scholar and focused my research on articles and surveys written in English and that were done past the year 2000. At the start of the process, I mostly used the keywords “eco anxiety”, “eco friendly behaviour” and “consequences of eco anxiety”. Most of these searches gave me articles that were not surveys, and although being recent and mostly focused on a young population, which was relevant for me, was not usable in a literature review as a case review. To find more relevant sources to my research question I started adding and using other keywords such as “climate distress”, “climate grief”, “eco guilt”, “youth” and “survey” amongst others.

Results.

Article 1.

Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey by Hickman et al. (2021).

The first article of the literature review is on an international survey. It was redacted by Caroline Hickman, Elizabeth Marks, Panu Pikhala and others for the Lancet Planetary Health Journal in 2021. The survey was conducted online and is called global due to the variety of countries the participants came from. The countries that the survey was conducted in are Australia, Brazil, Finland, France, India, Nigeria, the Philippines, Portugal the UK and the USA. The participants had to be between the ages of 16 and 25 and 1000 participants per country were chosen. This particular survey occurred through an online recruitment platform named Kantar. Participants had to answer a questionnaire that was developed by a team of experts in the corresponding fields and a few selected young people contributed to it as well. The questions had as a primary focus “climate-related worry, climate related functional impact, climate related emotions, climate related thoughts, experience of being ignored or dismissed when talking about climate change; beliefs about government response to climate change.” (Hickman et al., 2021, p.3). All the questions were translated into the language of the country the participants were taking the survey in. The results of this study can be categorized in two different parts. The first part is a result to the questions concerning “worry about climate change and impact on functioning” and the second one answers questions on “emotions about climate change”.

The results of the first part show that participants in the countries where people are more likely to experience degradation of their local environment caused by climate change are the most affected, self-reported, psychologically, and worried about climate change. In fact, the countries considered part of the Global South showed more concern and said the impact of climate change on their functioning was higher than what the young people in the Global North countries reported. Also, “in the Global North, Portugal (which had dramatic increases in wildfires since 2007) showed the highest level of worry” (Hickman et al., 2021, p.4) which reinforces our previous finding. Overall, of all the participants “60% saying they felt “very” or

“extremely” worried about climate change” which is a considerable number. In addition to that “More than 45% of respondents said their feelings about climate change negatively affected their daily lives”.

In the second part of the survey, we get a more detailed insight into the individual emotions of the participants. Participants were asked to answer between yes, no, or “prefer not to say” to questions in relation to “Emotions about climate change, “Negative beliefs about climate change and dismissal” and “Government-related beliefs”. This part of the survey allows us to link different emotions. For instance, “even among people feeling the same level of worry about climate change, those who reported feeling betrayed by the governmental response reported an increased number of negative thoughts. Similarly, negative thoughts remained significantly correlated with a perception of government failure while holding worry constant. (Hickman et al., 2021, p.8). This shows us that a better government response to climate change could help the youths’ mental health concerning environmental degradation. Even with the same amount of threat, a better government action could lead distress and hopelessness into optimism and positive action.

Article 2.

Worries about modernity predict symptom complaints after environmental pesticide spraying by Petrie et al. (2005).

The second article we will be using in this literature review is study conducted in 2005 by Petrie et al. to find out if people were influenced in their self-report of symptoms by environmental happenings. This survey does not fit the criteria of youth that was desired in the research, but it still gives insight in the processing of information in peoples environment in relation to possible pollution and health problems.

The number of participants in the survey is 292 residents of West Auckland in the United States. A questionnaire was used at the start, and it inquired about possible illness symptoms, how modern science is impacting their physical well-being and if they were against it. After that their town was sprayed with a certain pesticide. Following this, a second questionnaire was sent which 62 percent of the participants returned, this one inquired again about people’s current physical symptoms, how much they avoided the spray during the planned spraying and how they think the

spraying affected them and their close one's health wise. People who initially reported high amounts of symptoms and worries about modernity affecting their health had a higher chance of reporting symptoms in the follow up. Additionally, people who worried about modernity also were more avoidant to the spray and reported that the spray affected them and their entourage. As a result of the study, Petrie found that "Worries about aspects of modern life affecting health can strongly influence the attribution of symptoms and beliefs about health effects after environmental incidents." (Petrie et al., 2005)

Article 3.

Using the theory of planned behavior to investigate the determinants of environmental behavior among youth by Andrius Niaura (2013).

The last article presented in this thesis is about another research conducted by Wray-Lake et al. in 2010 about trends in environmental attitudes of adolescents. This article is written by Andrius Niaura in 2013 and studies how environmental behaviour is determined in young people. The method used in the research was an online questionnaire made of 5 parts. 259 people aged from 17 to 36 answered to it. This research focused on youth because "Moreover, during the youth period individuals are most open to socialization influences and their values and worldviews undergo significant formation (Alwin & McCammon, 2003). Therefore, identities formed during this time are likely to inform values, attitudes, and behaviors throughout life (Niaura, 2013, p.1). We could deduce that focusing on youth might be more effective to combat climate change in the long run.

The results of this questionnaire were also there to showcase if there was a correlation between intent of action, in this case environmentally friendly behaviour, and the actual action. Also, in the entire pool of people who answered the questionnaire, "Respondents' gender, income, education and religious beliefs did not make a considerable impact on their environmental attitudes, behavioral intentions, actual behavior, etc" (Niaura, 2013, p. 77). The results also showed that people with the intention to help the environment actually acted more environmentally friendly. Only 21% of people with intent to help the environment did not act environmentally friendly.

Intent of behaving was not the only influencing factor in making environmentally friendly actions according to this study, in fact “64.3% of the respondents had no intentions to behave environmentally friendly because of relatively low social pressure they received.” (Niaura, 2013, p. 79) So social influence might have been helpful in encouraging ecofriendly actions. Also, when the act of being environmentally friendly was considered as difficult, environmentally friendly behaviours were less likely to occur.

Discussion.

Environmental anxiety vectors

As we have seen, young people are increasingly worried about climate change. These same young people are also worried about the environment and more than half of them are seeing the future with a pessimistic eye. Anxiety can easily develop in people when confronted by bad events, these events will then be associated with fear even when the immediate consequence of the events are often harmless. (Mayo Clinic, 2018) However, in the case of climate change, negative consequences are definitely real, even if they are not immediate or visible for the less vulnerable part of the global population. In the areas where climate change has already hit, and the environment has become less habitable, populations are already experiencing rates of increased stress. "Personal experience of extreme weather events can lead to psychological and mental health outcomes associated with loss, disruption and displacement, as well as cumulative mental health impacts from repeated exposure to natural disasters" (Swim et al., 2009, p.80). This perfectly matches the results of the first articles surveys that found that young people living in the Global South felt higher levels of worries and felt more of an impact of climate change in their daily lives. The more the climate crisis worsens, and the more people will be affected, we can deduce that the number of people suffering from environmental anxiety will increase as well. It is therefore important to know how this stress will affect individuals polluting behaviours.

However, a person's proximity to places affected negatively by climate events is not a necessary factor. Most young people are now increasingly connected to the internet (The Common Sense, 2022) and have access to many sources of information concerning climate change catastrophes and pessimistic news concerning the future. As we have seen, (Stokols et al., 2009) the amount of exposure to news and information and the way it is propagated through current fast-paced sources of information can cause immense stress and when that is combined with eco-guilt concerning a young's person habit, which they may or may not have control over, it becomes a perfect breeding ground for eco-anxiety.

Consequences on behaviour

Studies are still divided about the consequences eco-anxiety will have and has on individuals. After looking through several studies, it seems that the general consensus is that it depends on the severity of the anxiety and can also be situational.

In the case of something closer to guilt, eco-guilt, environmental anxiety is actually beneficial to the cause of saving the environment since it increases environmentally friendly behaviours in people (Swim et al, 2009, p.85). We also saw in the third article that social influence increased green behaviour in young people. This type of guilt and social encouragement can therefore help greatly in changing people's habits and reduce their carbon footprint for the better of the planet.

Environmental anxiety can also affect people negatively, worsening their habits or enter into cycles parallel to the ones we can see in other types of anxiety. Similarly, to a person suffering from environmental anxiety, a person with social anxiety can enter a cycle of avoidance by avoiding all triggers, in this case social gatherings, and form even worse habits by trying to find ways to cope with their stress. Some of the people suffering from this condition in the case of environmental anxiety could also form a cycle of avoidance: getting stressed by the consequences of their polluting habits, find a distraction, and then continue, worsening their personal stress and the stress on the planet at the same time. A common avoidance tactic in this case is said to be consumerism, which worsens the situation overall (Randall, 2005, p.7).

Climate change can affect people negatively but however, participating in climate friendly behaviour such as recycling has been proven to benefit personal mental health and to give a sense of purpose. (Swim et al., 2009, p.93-94) This seems like a good suggestion for relieving eco-anxiety and at the same time prevent it which make it look like a win-win situation compared to the less desirable situation where our individual finds himself in a downward spiral.

Promotion of healthy environmental concern

Now that we have seen how environmental anxiety can occur and its consequences on individuals, we can discuss its prevention and ways to make it a better situation for both our planet and us. In fact, the problem starts at the very beginning, when we

learn about climate change and its disastrous consequences. “well-meaning attempts to create urgency about climate change by appealing to fear of disasters or health risks frequently lead to the exact opposite of the desired response: denial, paralysis, apathy, or actions that can create greater risks than the one being mitigated” (Swim et al., 2009, p.80). News related to climate change often relay images of climate disasters and pessimistic news and views on the future. This can cause unnecessary stress and instead of making the population more optimistic it just takes their hope away.

Another problem we encounter is that media representation of eco-friendly lifestyle is harsh “The expectation is that an ecologically sustainable life will be a difficult and worthy one, lacking in enjoyment or ordinary pleasures.” (Randall, 2005, p.9)

Consumers of media who might have been interested in being more eco-friendly might back off due to this representation of a low carbon footprint life. This correlates with the findings of the study conducted by Wray Lake et al. on pro-environmental trends in adolescents that showed young people were less likely to engage in environmentally friendly behaviour when they viewed that kind of lifestyle as complicated and bothersome.

Answering the Research Question

We can now see that the relationship between environmental anxiety and eco-friendly behaviours is a complicated one. Environmental anxiety in individuals can influence their appraisal of the situation on many levels which influence in turn their decision making. High levels of environmental anxiety that was generated through consumption of alarmist media concerning the climate crisis could have negative effect on one's behaviours, especially if the portrayal of an environmentally friendly lifestyle is drawn as particularly difficult to organize, to afford or to start. This situation could make environmental anxiety reinforce apathy and harmful coping mechanisms to combat the stress caused by the climate crisis. However, environmental anxiety can also have positive effects on individuals environmentally friendly behaviours. If they view adopting ecofriendly habits as simple to implement in their current routine and the portrayal they have of the climate crisis was not only built up by negative and fast paced media representations, their anxiety could push them to behave in a less polluting way. These two examples one how environmental anxiety could affect ones

ecofriendly behaviour are on the opposite side of the spectrum of possibilities and planning an individual's behaviour requires to take into account many more factors. Nevertheless, we can still gather from this information that promoting a less alarmist view on the climate crisis in the media, while still not undermining its importance and dangers, is crucial. Controlling the media or attempting to make news outlets promote a certain view of climate change would be very challenging due to the sheer amount of information available on the internet seems impossible and also not ethical, therefore a different approach could be attempted by putting an emphasis on environmental education in school and government programs. A healthier view on climate change and the environment could relieve some of the stress generated by the crisis and at the same time encourage green behaviour in people.

Limits

Planning and predicting someone's behaviour is of course not an exact science and so many factors come into play that will influence the way people act in an unpredictable manner. Personality, values and social norms can create a matrix of possibilities for each specific decision one takes, so we can only guess the influence that one part of the entire mechanism has that makes people behave the way they do. This problem is only one of the many when trying to answer how environmental anxiety affects ecofriendly behaviour. For instance, some people are naturally more sensible and prone to developing anxiety disorders and might more easily become unable to act the way they want to, apathetic, develop unhealthy coping mechanisms even if they have a somewhat realistic view of climate change and are aware of how to change their habits to limit personal pollution in a simple way. This becomes increasingly complicated when we look at our daily lives and how many things can be changed because they are wasteful or harmful to the environment: becoming stressed can therefore occur very quickly. Another part that limited the answer to the research question is the scope of the studies that were reviewed. The studies and most of the literature focused mostly on young people or individuals living in Europe, the USA or other countries of the Global North. Even when they included individuals from the Global South, it still does not give us a complete global insight since most of the surveys were completed online and excludes anyone with no internet access, which is not an insignificant number. In fact, in 2020, it was recorded that "2.2 billion

– or 2 in 3 children and young people aged 25 years or less – do not have internet access at home” (2020, UNICEF). Most of the studies found were not only from countries of the Global North, but also mostly from countries in northern Europe, with most of the studies coming from Finland. A few other studies were made outside of these areas but involved countries with higher GDP, which is the Gross Domestic Product of a country, such as India. There was therefore a lack of representation in studies about environmental anxiety in countries with lower GDP and that were not located in Europe or the United States. The research was done for the most part in English so that is a factor to also keep in mind concerning the lack of representation since there might be more diverse studies done but in different languages.

[Suggestion for further research.](#)

Further research on this topic would be very needed considering the urgency of dealing with climate change and the rise of mental illness in young people. Analyzing people’s behaviour pattern and how they can reduce their footprint would be an efficient way to help with this. A lot of the research produced was mostly axed around surveys or questionnaires, observational studies about people’s behaviour in relation to environmental anxiety could therefore add more insight to this topic. Since this topic is also more on the recent side, long-term studies were not really produced, which could be helpful and give a more detailed understanding of the relations between environmental concern and action. One more problem with surveys is that there is always a gap between what people say they are doing versus what their actions are in reality. People can always underestimate or overestimate, willingly or not, their actions.

Conclusion.

To conclude, environmental anxiety affects ecofriendly behaviours in various ways depending on many factors present in their environment that can also influence each other. The factors that influence their behaviour are peoples' social influences, appraisal of the situation and personal characteristics which can all to some degree be affected by environmental anxiety. Additionally, depending on the individual's perception of the climate crisis and environmentally friendly lifestyles, this type of anxiety will either amplify their ecofriendly habits or have the opposite effect. The last aspect to consider is that some people are naturally more prone to anxiety than others and, in that case, environmental anxiety might have a different influence than what was expected on their habits. Of course, predicting patterns of behaviours is not completely foolproof, however it gives us an idea on what areas to act to turn environmental anxiety and stress into something positive for the environment or try to relieve it. We can now try to answer the questions asked in the introduction: if someone is anxious that they might lose their place of residence due to rising sea levels, will they start taking more public transport instead of driving? Will a farmer who notices an increase in forest fires switch to a less wasteful way of watering his crops? Or on the contrary, will he overuse fertilizers to make up for lost profit at the risk of polluting nearby rivers? The truth is we could try to predict their behaviour pattern turning to be more on the environmentally friendly side or not based on having more information on each individual situation, but we cannot predict it with foolproof certainty. If the person on the verge of losing their living situation affected by environmental anxiety has an overly pessimistic and unsure view on their own future and deems it as already doomed, he might not care about taking public transport to be more ecofriendly. On the other hand, the farmer affected by the same type of anxiety might be part of an environmentally friendly farming cooperation and the social pressure to pollute less on top of the stress created by first hand exposure to the damages of the climate crisis might push him to adopt less wasteful production tactics.

References.

Alwin, D. F., & McCammon, R. J. (2003). *Generations, cohorts, and social change*. In *Handbook of the life course* (pp. 23-49). Springer, Boston, MA.

Bean, C. (2007). *Young People's Voting Patterns*. In *Youth and Political Participation* (pp. 33-50). Brill.

Booth, A., Sutton, A., Clowes, M., & Martyn-St James, M. (2021). *Systematic approaches to a successful literature review*.

CEAS Consultants. (2000, April). *The Environmental Impact of Dairy Production in the EU: Practical Options for the Improvement of the Environmental Impact*. European Commission.

Ethical Consumer. (2022) *Nice Inc*. Ethical Consumer Research Association Ltd. Retrieved from <13/12/2022> <https://www.ethicalconsumer.org/company-profile/nike-inc>

De Moor, J., Uba, K., Wahlström, M., Wennerhag, M., & De Vydt, M. (2020). *Protest for a future II: Composition, mobilization and motives of the participants in Fridays For Future climate protests on 20-27 September, 2019, in 19 cities around the world*.

Haugseth, J. F., & Smeplass, E. (2022). *The Greta Thunberg Effect: A Study of Norwegian Youth's Reflexivity on Climate Change*. *Sociology*, 00380385221122416.

Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., ... & van Susteren, L. (2021). *Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey*. *The Lancet Planetary Health*, 5(12), e863-e873.

IPCC. (2022). *Sixth Assessment Report: Headline Statements from the Summary for Policymakers*. Retrieved from <https://www.ipcc.ch/report/ar6/wg2/resources/spm-headline-statements>

IPCC. (2022). *Sixth Assessment Report: Fact sheet - Responding to Sea Level Rise*. Retrieved from <https://www.ipcc.ch/report/ar6/wg2/about/factsheets>

IPCC. (2022). *Sixth Assessment Report: Fact sheet – Food and Water*. Retrieved from <https://www.ipcc.ch/report/ar6/wg2/about/factsheets>

Mayo Clinic. (2018, May 4). *Anxiety disorders*. Patient Care & Health Information. Retrieved from <https://www.mayoclinic.org/diseases-conditions/anxiety/symptoms-causes/syc-20350961>

McKay, A. (Director). (2021). *Don't Look Up* [Film]. Hyperobject Industries. Bluegrass Films.

Niaura, A. (2013). *Using the theory of planned behavior to investigate the determinants of environmental behavior among youth*. Environmental Research, Engineering and Management, 63(1), 74-81.

Oxfam. (2020, September 21). *Carbon emissions of richest 1 percent more than double the emissions of the poorest half of humanity*. Oxfam International. Retrieved from <12/12/2022> <https://www.oxfam.org/en/press-releases/carbon-emissions-richest-1-percent-more-double-emissions-poorest-half-humanity>

Randall, R. (2005). *A new climate for psychotherapy?*. Psychotherapy and Politics International, 3(3), 165-179.

Patchen, M. (2006). *Public attitudes and behavior about climate change*. Purdue climate change research center outreach publication, 601.

Petrie, K. J., Broadbent, E. A., Kley, N., Moss-Morris, R., Horne, R., & Rief, W. (2005). *Worries about modernity predict symptom complaints after environmental pesticide spraying*. Psychosomatic Medicine, 67(5), 778-782.

Santomauro, D. F., Herrera, A. M. M., Shadid, J., Zheng, P., Ashbaugh, C., Pigott, D. M., ... & Ferrari, A. J. (2021). *Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic*. The Lancet, 398(10312), 1700-1712.

Stokols, D., Misra, S., Runnerstrom, M. G., & Hipp, J. A. (2009). *Psychology in an age of ecological crisis: From personal angst to collective action*. American Psychologist, 64(3), 181.

Swim, J., Clayton, S., Doherty, T., Gifford, R., Howard, G., Reser, J., ... & Weber, E. (2009). *Psychology and global climate change: Addressing a multi-faceted phenomenon and set of challenges*. A report by the American Psychological

Association's task force on the interface between psychology and global climate change. American Psychological Association, Washington.

The Common Sense. (2022, March 9). *The Common Sense Census: Media Use by Tweens and Teens*. Common Sense. 3-4.

The Nature Conservancy. (2022). *Calculate Your Carbon Footprint*. The Nature Conservancy. Retrieved from <12/12/2022>
<https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/>

Unicef. (2020, December). *How many children and young people have internet access at home? Estimating digital connectivity during the COVID-19 pandemic*. UNICEF DATA. Retrieved from <https://data.unicef.org/resources/children-and-young-people-internet-access-at-home-during-covid19/>

United Nations. (2022). *What is climate change?*. The United Nations. Retrieved from <12/12/2022> <https://www.un.org/en/climatechange/what-is-climate-change>

United Nations. (2021, February 19). *UN hails 'day of hope' as US officially rejoins Paris climate accord*. The United Nations. Retrieved from <https://news.un.org/en/story/2021/02/1085212>

Vasseur, V. (2022, February 2022). *Présidentielle : l'environnement et le pouvoir d'achat, principales préoccupations des jeunes selon un sondage*. Radio France. Retrieved from <https://www.radiofrance.fr/franceinter/presidentielle-l-environnement-et-le-pouvoir-d-achat-principales-preoccupations-des-jeunes-selon-un-sondage-5406603>

Wang, A. (2017, August 15). *How to stop the cycle of social anxiety disorder*. Anxiety.org. Retrieved from <https://www.anxiety.org/2-ways-to-counter-the-vicious-cycle-of-social-anxiety-disorder-sad>

WHO. (2022, March 2). *COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide*. World Health Organization. Retrieved from <https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide>

Wray-Lake, L., Flanagan, C. A., & Osgood, D. W. (2010). *Examining trends in adolescent environmental attitudes, beliefs, and behaviors across three decades*. *Environment and behavior*, 42(1), 61-85.



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