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SPECIAL ARTICLE

The psychology of climate anxiety

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This paper focuses on climate anxiety and its role in the psychology of climate change, compared with responses to the COVID-19 global pandemic. Four psychological hypotheses for why we do not act on climate change will be reviewed, and the role of anxiety for each, as well as potential solutions. Different types of climate anxiety both inside and outside the clinic will be explored, along with associated defence mechanisms and treatment.

Keywords Climate anxiety; climate change; psychoanalysis; post-traumatic stress disorder; ecological trauma.

Climate psychology and climate anxiety

The past decade has seen the important development of climate psychology.[1–7] Ursano and colleagues[2] describe climate change as one of the top threats to global health in the 21st century, and psychology has begun to respond. The American Psychological Association's 2010 report into climate change[1] identified six key areas for psychology, including risk perception, psychological and behavioural causes of climate change, psychosocial impacts of climate change, adaptation and coping strategies, psychosocial barriers to action and the role of psychologists. At the same time, psychotherapists and clinical psychologists are coming to terms with ecological loss, anxiety and guilt in their patients, and also among themselves, as they come to grips with the faltering biosphere.[8,9]

Focuses on climate anxiety and its role in climate psychology, while recognising that anxiety interacts with a range of other emotions such as grief and rage. The American Psychological Association[10] refers to ecoanxiety as 'a chronic fear of environmental doom', ranging from mild stress to clinical disorders like depression, anxiety, post-traumatic stress disorder and suicide,[11–13] and maladaptive coping strategies such as intimate partner violence[14,15] and substance misuse.[16–20] Cianconi et al[21] found complex types of climate anxiety and trauma, including intergenerational effects, especially where environmental damage involves loss of a way of life or culture.

It is essential to differentiate between pathological and adaptive forms.[22] *The Handbook of Climate Psychology*[4] defines climate anxiety as a 'heightened emotional, mental or somatic distress in response to dangerous changes in the climate system', but suggests that 'paying heed to what is happening. . .is a healthier response than turning away in denial or disavowal'. Climate anxiety can lead to symptoms such as panic attacks, loss of appetite, irritability, weakness and sleeplessness,[1] yet given the increasing evidence about the impact of climate change on health, psychological professionals might ask if their patients feel too much anxiety, or whether they themselves feel too little. Climate anxiety is being felt much more powerfully among the young,[23,24] by first responders to climate-related natural disasters[25,26] and climate scientists and activists, who are exposed to information about the threat more than most and therefore may need psychological support.

When considering the effects of climate anxiety, it is necessary to focus on at-risk populations, including children, the elderly, the chronically ill, those with mental illnesses and those with mobility impairments.[2] Those from lower socioeconomic groups are disproportionately affected by climate change because of disparities in infrastructure and health resources. Severe weather events can also damage social support systems and mental health infrastructure, further isolating the most vulnerable.[27–29] Clayon[30,31] reports that anxiety, fatalism, hopelessness and fear have been

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increasing globally, and offers a clinical approach to understanding, measuring and treating climate anxiety, while emphasising the distinction between adaptive and maladaptive types, and the need to keep the society-level response required to combat climate change in mind.

Given our need to effectively mobilise in response to climate change, the Climate Psychology Alliance[4] suggests that psychologists and psychotherapists should not aim to get rid of climate anxiety, but instead 'support individuals and communities to build strong containers that allow the expression and exploration of their emotions without collapsing under it or turning away'. Climate change is a psychological problem but that does not mean that it should be individualised or medicalised. As Lawton writes,[32] if ecoanxiety is treated as pathology, 'the forces of denial will have won…what we are witnessing isn't a tsunami of mental illness, but a long-overdue outbreak of sanity'.

Why do we not act? Four psychological hypotheses

Climate anxiety is heightened in those that are aware of and *feel* the existential threat of climate change, by the fact that most of us, most of the time, act as if it does not exist. The poverty of collective responses to climate change is in stark contrast to its threat. Why do we not act? This section explores four psychological hypotheses, the role of anxiety for each, and comparisons with psychosocial responses to COVID-19.[33]

Faulty alarm hypothesis: cognitive bias in our evolved risk detection system

This explanation suggests humans have evolved the ability to respond to certain types of threats optimally, especially those that are immediate, visible, fast (something happens so slowly that it slips our notice), with historical precedent, simple causality, clear and direct personal impacts or caused by an 'enemy' tribe or group.[1,34,35] From this perspective, the problem with climate change is that we do not feel enough anxiety as it slips our notice by missing all of the characteristics above. The answer is to help us feel the anxiety, to motivate us to act, turning up the volume on the threat and our response. The lack of effective risk perception leads to behaviours that worsen climate change.[36] According to the 2018 American Psychological Association report, 'the perception of risk regarding climate change, belief in the ability to effect change, and the etiology attributed to extreme weather events are important factors impacting the decisions people make regarding climate change related behaviors'.[2]

Comparison with COVID-19

Both climate change and COVID-19 are environmental crises where human behaviour and psychology are important factors, yet the latter happens much faster, with clearer links between behaviour and consequence, leading to much more dramatic responses. International efforts to respond to COVID-19 may have the unintended benefit of shaking people out of climate lethargy, by showing that the global mobilisation required to confront climate change is possible, and allowing the public to see (and feel) that invisible environmental dangers are very real.[33] However, as with climate change, with the COVID-19 pandemic we also see huge levels of denial, anger and despair.

Social dilemma: bystander effect

Social dilemmas (or commons dilemmas) involve conflict between individual and collective self-interest.[37] For example, it is in every fisherman's interest for other fishermen to adopt quotas on how much fish can be caught every year to ensure fish stocks recover, but simultaneously, each would like to take what they can. Climate change is the ultimate commons dilemma.[38] How do we escape from this 'rational-disaster' model of human extinction? Games theory[39] studies such conflicts, most famously with the prisoners' dilemma. Anxiety here refers to not only the 'costs' of the game when played badly, but of predicting the behaviour of others. How can I trust that you will do the right thing? And how can I trust that you trust that I will do the right thing? Research in human and animal behaviour[40,41] shows cooperative strategies can flourish in a wide range of contexts. The key is to focus on the structure of the game, to allow cooperative behaviour to flourish.

Comparison with COVID-19

Responses to both involve social dilemmas. When reviewing how successful different countries were/are in tackling the viral pandemic, it seems that a crucial factor was not the wealth of the nation, but its social cohesion and a collectivist versus individualistic orientation.[42–44] To the extent that the measures were clearly enunciated, seemed fair and received widespread social support, systems of trust were established and each could play their part in the collective effort. Climate change is another order of complexity beyond COVID-19, but important lessons can be learned.

Ecopsychology: the problem of disconnection from nature

Since the 1990s, ecopsychology has emerged as a particular response within psychology to environmental problems, emphasising a holistic approach,[45–48] suggesting that our modern lives are so disconnected from nature that we do not care enough to want to protect it, and fail to realise that we are threatened by damage to the natural world. Ecopsychology views disconnection from nature as also central to the current mental health epidemic.[18,49] Reconnecting to nature is seen as a requirement for mental health that also provides the emotional link that will drive us to act (out of love, not just fear). Ecopsychologists emphasise that the anxiety, guilt, grief and anger we feel concerning collapsing ecosystems, our 'pain for the World', are appropriate and, although difficult, provides the starting point for action and a renewed relation to Earth.[50]

Comparison with COVID-19

COVID-19 forces us to recognise that the 'split' between ourselves and nature is not real, and shows that our social systems are all too fragile in the face of environmental

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danger. On the other hand, ecopsychology tends to downplay that nature does at times try to kill us, and is not only a beneficial force that nurtures. For some, COVID-19 is a natural response of Earth to human degradation, as Gaia retaliates against a human civilisation getting too close to remaining wild spaces. In a sense, it has partially worked. COVID-19 has arguably done more than any climate treaty to reduce carbon emissions,[33] perhaps buying us a little more time. Some hope this is a moment for 'waking up', to take stock and give us a chance to change our futures.

Psychoanalysis: climate denial and apathy as a defence against anxiety

The psychoanalytic model of environmental problems[5–7,51,52] focuses on the complex way humans deal with anxiety (see also terror management theory[53]). In contrast to the faulty alarm hypothesis, the anxiety of climate change is seen as not too little, but too much, defended against through individual and socially structured defences.[9,54] Defence mechanisms are strategies the ego uses to defend against anxiety, conflict and threats to self-esteem. From this perspective, as with the Faulty Alarm hypothesis, we need to be able to feel the anxiety (and other feelings) produced by climate change. However, merely amplifying messages of fear and guilt can backfire, by strengthening and rigidifying defences. Climate anxiety is therefore, in part, a realistic but painful response to our situation, and difficult to hold onto, especially in a social context of generalised denial.

Comparison with COVID-19

The psychoanalytic perspective helps explain certain factors the faulty alarm theory cannot account for, in particular, why responses to climate change include a substantial amount of anger and hostility. Climate scientists have been the recipients of death threats and abuse, and negative reactions in the context of COVID-19 are even more pronounced.

Types of climate anxiety and defence

Melanie Klein[55] identified two groups of anxieties. Paranoid–schizoid anxiety involves feelings of persecution and fears of annihilation and fragmentation, and is defended against by psychotic defences (denial of reality), projective identification and splitting. Depressive anxieties relate more to loss, guilt and fears of dependency, dealt with by neurotic defences. We can relate these to the findings of affective neuroscience,[56] which differentiates the FEAR system (involving the amygdala, medial and anterior hypothalamus, and the periaqueductal gray), which generates anxiety in response to external threats; and the PANIC system (centred on the anterior cingulate gyrus, with connections to thalamic, hypothalamic and other nuclei, such as ventral tegmental areas), which generates anxiety in response to the loss of attachment figures.

The psychoanalytic model suggests that the threat of climate change leads to two types of climate anxiety: first, the 'apocalyptic' fears (fears of death, annihilation and extinction); and second, complex feelings around loss, grief, dependency and guilt[52,57] for losses that have already occurred and those that are to come ('pre-traumatic stress', 'anticipatory mourning', 'solastalgia'[58,59]). Responses to climate anxiety include proximal defences (pseudo-rational, threat-focused and more conscious), distal defences (functioning unconsciously and taking a symbolic form) and facing difficult feelings and generating adaptive responses.[60] Anxiety, guilt and loss become more manageable as they become more shared,[61] and can be reflected upon in a safe space where realistic possibilities for action open up. All major defence mechanisms[62] are clearly visible in relation to climate change, focused on the two emotional threats: denying the reality of climate change (it does not exist, it is a conspiracy), or denying our losses, dependency or responsibility (nature might die but we will be fine; it is caused by other humans or natural causes, the Chinese or the sun, not me).

There are many shades of variation: not only outright denial, but minimising the threat (it will not be that bad, it will happen in the future, or to other species or countries), by finding scapegoats through projection; intellectualisation (taking courses on climate change without allowing emotional responses or behavioural change); idealising charismatic leaders that support denial, repressing and suppressing awareness; reaction formation (denying the reality or the impulse while simultaneously giving expression to its opposite, e.g. those who 'burn a tire for Earth day' or participate in 'coal-rolling', becoming environmentally destructive to prove to themselves they either do not believe in climate change or do not care, as an attack against perceived group enemies, and a means of evacuating bad internal states); hopelessness (it is too late anyway); apocalypticism (the end of the world is exciting and allows for fantasies of the 'bad' being punished for their behaviours, and we can start again and better[63]); or manic defence behaviours, such as seeking distraction through increasing addictive behaviours and consumption,[18,19] to avoid thinking about the problem. A certain amount of climate activism is also of a manic reparation type, which can quickly lead to disillusion and burnout if the movement's goals are not quickly met. These are just a few of the responses/defences that climate change evokes, with many reactions comparable with the COVID-19 pandemic.

Working with climate anxiety

Adams[64] asserts that treating climate anxiety needs to address the underlying dangers. and therefore requires meaningful collective responses, including 'acknowledging loss collectively and publicly' as 'an important step in facing up to the reality of the Anthropocene and the impossibility of carrying on "as normal"'. Randall[57,59] has emphasised the importance of experiencing and articulating difficult emotions, such as loss, grief and fear, in a shared context as a way of developing forms of mutual support. In addition to dealing with anxiety in their clinical practice, therapists can help support the development of social containers to express, contain and mobilise climate anxiety into positive social change.[4] Ultimately, the results need to be measured in reduced carbon dioxide emissions rather than necessarily reduced expressions of fear.

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By allowing feelings and thoughts we usually avoid to be brought into awareness, we can avoid more pathological unconscious acting-out. Bednarek[65] agrees that climate anxiety should not be seen 'as a problem to be solved or a condition to be medicated', but rather 'an important encounter with our awareness of our impact on the world'. All of us need to wake up to climate anxiety, including mental health professionals. Those who are most informed about the current danger, such as scientists, journalists, students or activists, often express the most intense fears – an anxiety heightened by feeling isolated in a culture in denial.[66,67] Instead of pathologizing their anxiety, which only worsens mental health, we can ask 'what support do we collectively need in order not to freeze and anaesthetise ourselves against this context of so much loss?'[65]

The answer lies not only from work in individual psychotherapy, but in developing strong social networks of supportive relationships, and a living relationship with the natural world.[68] Community is crucial for collective resilience, as we are seeing in the COVID-19 pandemic. Nature itself can function as one of these containing spaces.[8,46,69] To conclude, the symptoms of climate anxiety are not necessarily feelings to be got rid of, but lessons to be learned, although only if they can be felt in a safe way, through developing meaningful action and positive social, psychological and ecological change.

About the author

Joseph Dodds (PhD) is a psychoanalyst (IPA) in private practice with the Czech Psychoanalytical Society, a psychotherapist (UKCP), Chartered Psychologist (BPS) and psychology lecturer with the University of New York in Prague, and the Anglo-American University..

Declaration of interest

None.

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