Facing up to ecological crisis: a psychosocial perspective from climate psychology

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Introduction to climate psychology

Facing the facts of climate change and ecological crisis involves encountering powerful feelings such as loss, guilt, anxiety, shame and despair that can be difficult to bear. How we deal with these feelings shapes how we respond to the crisis and is critical in determining whether these responses are ultimately adaptive or maladaptive. Adaptive responses support psychological adjustment to the emerging new realities and stimulate appropriate and proportional action (Crompton & Kasser 2009). Maladaptive responses work against this in some way.

In recent years the psychological dimensions of climate change have received greater attention in climate science, policy and in the media, with growing acceptance and appreciation of the contribution that these perspectives can make in enriching our understanding of both the causes and the impacts of climate change. The field has advanced from arguing that psychology has an important contribution to make (American Psychological Association 2009), complaining that the contributions and insights are not widely accepted or applied (Swim et al. 2011), restating the argument in mainstream scientific publications (Clayton et al. 2015), to a position of greater influence over the inclusion of psychology in Intergovernmental Panel on Climate Change (IPCC) reports. For example, the American Psychological Association has achieved IPCC observer organisation status and some leading psychologists have been selected as authors for the Special Report on 1.5 degrees and for the main sixth assessment report. The significance of this development should not be understated, but nonetheless the role that psychology is currently playing still barely scratches the surface of its potential. There is much more that psychology - though not necessarily mainstream psychology – can offer. This claim brings us to the purpose of this chapter: making the case for the contribution of what we term 'climate psychology'. This approach has emerged in recent years occupying a space left under-explored by mainstream psychology and climate science: the role of the non-rational and unconscious in human cognition and decision-making. These aspects are not entirely ignored by the mainstream of course; constructs like 'denial' are popularly used to explain lack of engagement and adaptive action, but a deeper more nuanced discussion is generally absent in the literature. For example, denial (in the context we mean here) features just once in the Working Group II[1] contribution to IPCC's

[1] IPCC Working Group II report is on impacts, adaptation and vulnerability

Fifth Assessment Report: "If a perceived high risk is combined with a perceived low adaptive capacity, the response is fatalism, denial, and wishful thinking" (IPCC 2014b, 204). Its single appearance in the Working Group III[2] report is slightly more elaborated: "There is evidence of cognitive dissonance and strategic behaviour in both mitigation and adaptation. Denial mechanisms that overrate the costs of changing lifestyles, blame others, and that cast doubt on the effectiveness of individual action or the soundness of scientific knowledge are well documented, as is the concerted effort by opponents of climate action to seed and amplify those doubts" (IPCC 2014a, 300). Neither of these entries explains the psycho-social processes involved, nor how to address them.

The reason why mainstream psychology struggles to account for the complexities of human behaviour is largely due to its methodological conventions. Studies often split off individual behaviour from its social context and focus on a single or a small number of factors. It is largely quantitative, relying on self-report survey-based methods or controlled laboratory studies which usually use students as subjects. Climate psychology on the other hand uses qualitative methods and proceeds from the premise that when it comes to understanding humans it is precisely what can't be counted that really counts. It draws upon a variety of sources that have been neglected by mainstream psychology including psychoanalysis, Jungian psychology, ecopsychology, chaos theory, continental philosophy, ecolinguistics and social theory. From such sources we glimpse some of the complexity and mystery of the human. The raw passions that often dominate our thoughts and behaviours; the internal conflicts and competing voices that characterise our internal lives and give colour to our different senses of self; the effect of systems of domination on the way we think and feel about ourselves. Viewed from this perspective it is possible to see how our attempts to defend ourselves against the feelings aroused by worsening climate change are mediated by deep-seated assumptions about ourselves and society. For example, a powerful sense of entitlement may help us to shrug off guilt and shame, or a touching faith in progress can mitigate anxiety and induce complacency. Typically we will feel torn between different impulses, to face and avoid reality, between regret and the desire to make amends versus cynicism and hopelessness, between what is convenient for us and what is necessary for the common good.

[2] IPCC Working Group III report is on mitigation

Climate psychology attempts to offer a psycho-social perspective, one that can illuminate the complex two-way interactions between the personal and the political, the psychological and the social. It is concerned with understanding how our collective paralysis plays out in both our individual lives and in our culture.

The contribution of climate psychology

Climate psychology seeks to further our understanding of:

- collectively organised feelings such as loss, despair, panic and guilt evoked in individuals, communities, nations and regions by climate change and environmental destruction;
- defences and other strategies used to cope with the psychological threat brought on by climate change and ecological crisis, such as denial and rationalisation, that help us avoid facing difficult feelings, and how such threat responses manifest in the lives of individuals, families, groups and institutions;
- cultural worldviews and practices (e.g. faith in progress; sense of privilege and entitlement; materialism and consumerism; short-termism) that are ecologically damaging and inhibit effective change;
- conflicts, dilemmas and paradoxes that individuals and groups face in negotiating change with family, friends, neighbours and colleagues;
- psychological resources that support change: resilience, courage, radical hope, and new forms of imagination.

Climate psychology aims to:

- promote creative approaches to engaging with climate change and thinking in a realistic way about something whose implications are unthinkable;
- contribute to changes at the personal, community, cultural and political levels;
- support activists, scientists and policy makers seeking to bring about change;
- build psychological resilience to the destructive impacts of climate change, both those already being experienced and those that are anticipated, so that people can prepare and adapt as best they can, in ways that go beyond individual self-protection to serve the greater whole.

We now discuss each of these areas of understanding in turn, beginning with collectively organised feelings.

Collectively organised feelings

When we think of emotions we typically think of them as 'belonging' to the individual somehow. But why should emotion be individualised in this way? After all, we don't see language and meaning as private to the individual. A psycho-social perspective insists that emotion is as much a public as a private phenomenon, that powerful collective feelings can be provoked by social change and can also contribute to social change (Hoggett 2009). In the last couple of decades sociologists have become increasingly interested in the collective organisation of feelings (Goodwin, Jasper and Poletta 2001; Gould 2009) and several ways of thinking about this have emerged. First there is the idea that a particular constellation of feelings may characterise a historical era perhaps spanning decades. Following the cultural historian Raymond Williams this is often referred to as a 'structure of feeling' (Williams 1977). An example would be the *ressentiment* (a cocktail of grievance, envy and anger) that characterised much of German society in the 1920s and 1930s after the humiliation of the Treaty of Versailles which ended the First World War (Coser 1961). Secondly there is the idea of 'abiding affects' (Jasper 1998), feelings which endure over shorter timescales and may be specific to particular social groups such as social classes, minorities, and so on. A good example is provided by Debbie Gould in her study of the gay and lesbian community's response to the AIDs crisis in the USA, the powerful role of shame in demobilising protest and of 'gay pride' in sustaining and advancing it. Last but not least, contagious collective feelings such as panic may find expression in society in sudden and fleeting ways. The origins of crowd psychology lay in the study of such phenomena (Le Bon 1896), feelings which today are increasingly amplified by social media.

Emotion and affect

With regard to climate change, much has already been written on the powerful feelings evoked by it including grief (Randall 2009; Head 2016), melancholia (Lertzman 2015), fear and terror (Doppelt 2016). Of course many of these feelings are only aroused once someone becomes aware of climate change, because it is in the nature of an emotion that it has a conscious object (climate change) and meanings (risk, loss) attached to it. But there is another kind of feeling, commonly referred to as an 'affect', which operates at a much less conscious level. Anxiety (the core ingredient of stress) is a classic example: typically when we are anxious our feeling flits from one thing to another, it has no secure object to attach itself to. It is also very visceral, felt primarily through the body rather than through cognition. This

distinction is important because it enables us to understand how people, such as those in denial, may not be 'climate aware' and yet nevertheless affected by powerful feelings provoked by climate change.

Containing our feelings

The distinction between emotion and affect is helpful for another reason. Generally speaking the more an emotion can be made conscious and therefore subject to reflection the more it can be contained. 'Containment' refers to the extent to which an experience can be digested and worked through or, put another way, the extent to which a feeling can be transformed into an emotion as opposed to remaining as an affect. The psychoanalyst Wilfred Bion (1962) likened the mind to a system for digesting experience. If an experience can be contained, even a difficult one, it will provide food for thought (and therefore for growth and development). But if it can't be contained then, like undigestible food, it gets stuck in the system or has to be expelled. So if we can't contain feelings of sadness or terror they will either get stuck in our system (paralysing despair) or we will get rid of them by projecting them into others (we find a substitute object, the Other, for our fear) or through blind forms of action (because action can itself be a way of getting rid of uncontainable feelings). Simply put, are we able to use our feelings or do they use us? Are we able to regulate them and use them creatively or are we going to be at their mercy? Crucially, this brings us on to the theme of the next section: the way we use coping and defence mechanisms when faced with the difficult-to-contain feelings aroused by climate change.

Coping with psychological threat

> Ecological crisis: when the environment of a species or population changes in a way that destabilises its continued survival (Isildar 2012)

We are without doubt in a situation of crisis. Destabilisation of planetary cycles and processes that regulate Earth's life support systems poses profound psychological threat. For example, to our sense of safety, and to the integrity and stability of self-identity, for it disrupts who we may think we are - as human beings separate and superior to other species with mastery over nature and control over our own lives. In challenging the morality of our destructive behaviours, our complicity and inadequate responses, it also poses a threat to self-esteem,

denting our confidence in our own worth and our abilities. Ecological crisis also threatens our life plans, ideas of progress and internalised expectations of the future. It is abundantly clear that how we have lived until now cannot remain the same for much longer - many aspects of our lives will have to fundamentally change in order to mitigate and/or adapt to the impacts of destabilised natural systems (Crompton & Kasser 2009; Lertzman 2015; Weintrobe 2013). Ultimately ecological crisis threatens our continued existence as a species.

When encountering a perceived threat, the disequilibrium caused creates stress, which is both physiological and psychological. The human tendency is to attempt to alleviate stress and decrease negative emotions through defence mechanisms and coping strategies in order to return to baseline functioning as soon as possible. In psychology literature the terms 'defence' and 'coping' are often used interchangeably. Whilst there is an argument for a distinction between them, namely that defence mechanisms are unconscious and unintentional and coping strategies are conscious and intentional (Cramer 1998), in lived experience threat responses are likely to involve both conscious and unconscious dimensions. The processes involved are also dynamic: there is possibility for movement of information back and forth between unconscious and conscious parts of the mind through processes of suppression and awareness.

Types of responses

There are different ways of categorising defence and coping responses. For example, by classifying into avoidant and approach types. Avoidant coping is a defensive form of regulation, involving denial, distortion, disengagement, and - as we introduced at the start of this chapter - suppression of negative emotions. Approach coping has three predominant forms: active coping, which is direct action to deal with stressful situations; acceptance, which is cognitive and emotional acknowledgement of stressful realities; and cognitive reinterpretation, which involves learning or positive reframing (Weinstein, Brown and Ryan 2009). Approach coping is generally considered adaptive because effort is directed towards containing the anxiety-evoking situation and overcoming the stress associated with it, whereas avoidant coping, whilst it may relieve stress in the short-term, if prolonged or situationally inappropriate is likely to become maladaptive and serve pathological ends. These ends manifest at the individual level: avoidant coping has been found to be associated with poorer health (Weinstein and Ryan 2011). But there are also ecological implications: coping responses either support psychological adjustment to the emerging new realities and stimulate

appropriate and proportional action, or they work against this in some way, and serve to protect us from having to make radical changes or take significant action.

We can also make a distinction between proactive and reactive coping. Proactive coping, also known as anticipatory adaptation or psychological preparedness, is undertaken in anticipation of an event, whereas reactive coping occurs after. The two types merge when responses are made to an event in order to both diminish its impact and prevent its re-occurrence (American Psychological Association 2009). Coping responses can be cognitive, affective or behavioural - or a mix of these.

Ecologically adaptive or maladaptive

The literature on the psychological dimensions of climate change and environmental behaviour identifies various defences and coping responses, which can be categorised as follows.

Ecologically maladaptive responses

- Denial or disavowal of ecological crisis (e.g. rejecting, deflecting, ignoring)
- Distortion of facts (e.g. reducing size of threat, putting threat into the future)
- Shifting responsibility (e.g. blame-shifting, denial of guilt, splitting, projection)
- Avoidance of difficult emotions (e.g. suppression, rationalisation, escapism, numbing, pleasure-seeking)
- Diversionary activity (e.g. minor behaviour change or displaced commitment)
- Non-action (e.g. resignation, passivity, lazy catastrophism)
- Self-deception (e.g. wishful/magical thinking, unrealistic optimism)
- Active catastrophism and self-destructive acts
- Self-enhancement values orientation (e.g. materialistic behaviour to enhance self-esteem, or self-protection to enhance sense of security and being in control)

Ecologically adaptive responses

- Seeking information, engagement with facts about ecological crisis
- Engaging with and regulating associated feelings (e.g. through mindfulness)
- Compassion, self-transcendence values orientation (care for human and non-human others)
- Connecting with nature
- Considered reflection on death, impermanence, human frailty and limitations

- Collaborative problem-solving

The psycho-social nature of threat responses

Threat responses are not isolated psychological processes: they are psycho-social phenomenon, culturally sanctioned and maintained by social norms and structures (Randall 2013; Crompton & Kasser 2009). As Lertzman (2015, 3) explains, "we produce, share and co-construct our unconscious negotiations of highly charged issues through our conversations, stories, advertising, intimate dialogues and public media discourses". Threat responses interact with other psycho-social factors in complex ways to influence cognition and behaviour (Andrews 2017). Understanding these processes and their dynamics and effects is critical for designing interventions to subvert maladaptive responses to ecological crisis, at individual and group levels. Becoming aware of maladaptive responses as they arise within us offers the possibility of choosing a different response. We discuss this further in the section on Psychological resources.

Cultural worldviews and practices

Climate psychology is interested in the beliefs, values, assumptions and presuppositions that are held at the collective level of human culture (cultural worldviews), and in the social practices that proceed from them. A cultural worldview serves to convey a sense of living in a world of order and meaning, giving purpose and a sense of meaning to life (Solomon et al 2004). The worldview that is dominant in a society pervades all aspects of life, and constitutes the broader contextual forces influencing each individual's values, identities, threat responses and conceptual systems. But the influence of a worldview often goes unnoticed by the individual, its assumptions unchallenged (Griffin 1995). This is because with repeated and ubiquitous exposure to its discourse, the worldview becomes internalised and is no longer obvious. It is taken for granted as something natural, rather than as something that we created and can therefore change. Climate psychology is concerned with making these assumptions visible so that they can be examined.

Ecologically damaging beliefs and assumptions

In western industrialised cultures there are a number of beliefs and assumptions that we contend drive ecologically damaging practices and inhibit effective change.

- The project of modernity aims to achieve human self-determination and freedom through a struggle against the limits imposed by nature
- Nature is a wild malevolent force that threatens civilised life
- Humans are entitled to dominate and exploit the natural world for our own ends - it exists for our use
- Humans are different from and superior to nature, and we can free ourselves from the limits of nature through our ingenuity
- We can control nature and harness its forces through technoscience
- Advancement of technoscience, industrialisation and economic development (achieved through a free market economy) are vital for human progress i.e. for improving the human condition
- Accumulation of material wealth and consumer goods is the primary measure of success, status and worth
- Problems created by the above (e.g. human poverty and inequality, overwhelm of biosphere cycles and processes) can be solved by doing more of the same (e.g. techno-fixing our way out of climate crisis)

Disconnection and disregulation

As Schwarz's model of self-regulation of individual health explains, disconnection in feedback makes it more difficult for a system to self-regulate (Shapiro & Schwartz 1999):

Disattention → disconnection → disregulation → disorder → disease

Through repeatedly not attending to an emotional, physical body or interpersonal cue, the individual becomes habituated to the stimulus so it is no longer accessible to awareness, and disconnection in feedback occurs. The model can be applied to the human relationship with the natural world. Disconnection from the natural world and denial of natural limits reduces our ability to regulate human activity within planetary boundaries: the Earth's feedback signals are ignored, misinterpreted or simply not noticed. Symbiosis becomes overexploitation, ingenuity turns into hubris, and human interests always win out to the detriment of other species.

Wild and malevolent nature

The belief that humans are different from nature is closely associated to a conceptualisation of nature as wild and uncontrollable, a malevolent force that needs to be fought against (Rust 2008). This perception manifests in language, for example with metaphors that equate nature with evil, projecting human vices onto the natural world. As the moral philosopher Mary Midgley (2003) explains, such projection not only absolves a person or society from destroying nature but also fulfils another psychological purpose: by killing the personification they have killed the vice, "they are symbolically destroying their own wildness" (166). A perception of malevolence is also conveyed in the phrase 'fighting climate change' where the climate system is personified as an active wilful enemy with intent to harm (Andrews 2016). It is to such a malevolent entity that the title of Lovelock's book 'The revenge of Gaia' speaks (Macy 1993). Our culture tames wildness and instils order through domestication of plants, animals and people (Totton 2011; Midgley 2003). These efforts give the impression of control over nature, and by extension the illusion that we can transcend its limits.

Mortality threat, control and self-protection

The ultimate natural limit that we may seek to transcend is death. We observed earlier that climate and ecological crisis poses existential threat. Unless the sense of self as part of nature is strong, existential threat tends to motivate people to enhance their self-esteem by prioritising self-enhancement values and pursuing extrinsic goals of material wealth and success (Fritsche and Häfner 2012; Sheldon and Kasser 2008), thus increasing consumerism and consumption and driving further depletion of nature's resources in a hellish self-reinforcing feedback loop. But climate change not only confronts us with our reality as mortal beings, it also reminds us that we are at the mercy of much more powerful forces. In this way it punctures hubristic illusions of control, destabilising our sense of who we think we are as human beings separate and superior to nature, and capable of controlling nature through our inventions in technoscience. The facts of ecological crisis are so resisted because they confront us with the reality that this deeply entrenched and longstanding cultural worldview *is no longer tenable*. As Naomi Klein (2014) says, climate change is a crisis of civilisation: a crisis of story.

One response to this crisis of story that we can see becoming stronger at both group and nation state level is self-protection. Self-protection values and isolationist tendencies have erupted to the surface creating political chaos, for example with the presidency of Donald Trump in the USA and the vote by Britain to leave the European Union. Self-protection is

anxiety-based, and therefore always has a paranoid tinge, it is pursued to cope with situations of uncertainty (Schwarz et al. 2012) and it can easily lead to physical violence.

Entitlement, resentment and social conflict

The rise of technoscience can be dated back to the mid-1800s at the end of the Industrial Revolution (White 1967). This union between science and technology enabled exploitation of nature on an unprecedented scale, way beyond that of the Scientific Revolution in the preceding centuries. A sense of entitlement to exploit nature helps shrug off any guilt that may be felt about the ecological destruction and disruption caused by overexploitation and overconsumption of nature's resources.

Gregory Bateson (1982) observes that the Industrial Revolution came with an "enormous increase of scientific arrogance" (311). Arrogance, superiority, exploitativeness and entitlement are dimensions of narcissism (Weintrobe 2004; Frantz et al. 2005), which can apply to societies and organisations as much as to individuals. With the rise of consumer culture, narcissism has become more prevalent in society (Lasch 1979; Kanner and Gomes 1995). Narcissism has been found to be an inhibitor of nature connectedness and a major barrier to resolving environmental problems (Frantz et al. 2005).

There are other ways in which a sense of entitlement can inhibit effective climate action. The loss of something to which we feel entitled, such as certain levels of material wealth and living standards, can trigger perceptions of injustice and feelings of resentment towards 'liberals' who urge restraint and living within our ecological means. Such grievances increasingly fuel support for Trump and other populist climate deniers, including Brexit supporting MPS such as Boris Johnson and Owen Paterson.

A much greater danger is now appearing on the horizon. It is highly likely that we are about to enter an era of 'ecological austerity' in which the effects of climate change and other ecological disasters lead to an inexorable rise in food prices, the mass displacement of peoples and the end of economic growth as conventionally defined. No longer 'finger-wagging liberals' but the earth itself will force restraint upon the entitled citizens of the West. The risk is that this fuels a new era of *ressentiment*, akin to that which underlay the rise of the far right in Europe in the inter-war period. When governments fail to adequately protect against or respond to climate change impacts, this may lead to loss of faith and trust in governments and

other civil institutions, resulting in backlash. Perceptions of inequalities or disparities in the impacts of climate change may trigger social unrest, intergroup conflict and violence (Doherty and Clayton 2011).

Trapped in ideology

The idea that technoscience can solve problems created by technoscience has been termed an 'ideological pathology' and a progress trap (Wright 2004). This trap also applies to capitalism, which sees the answer to climate crisis as even more capitalism, turning nature and even carbon emissions into commodities. Organisational studies scholars Christopher Wright and Daniel Nyberg (2015) call this process 'creative self-destruction' whereby global capitalism devises ever more ingenious ways to exploit and consume the earth's resources and life support systems. As Jared Diamond (2005) discovered in his work on the collapse of civilisations, when faced with a crisis they do not understand, civilisations tend to reinforce the very routines that put them into that crisis, through force of habit rather than by reason. In times of disruptive change, these routines become a trap that becomes deeper and harder to get out of with the short-termist tendencies of our political and economic systems.

The (in)coherence of worldviews

Belief systems are not necessarily coherent and can contain contradictory views. For example, at the same time as believing that human ingenuity will triumph through technoscience, with climate change denial there is also a rejection of the authority of science (Hamilton 2010). Whilst the belief in human separation from nature underpins technoscience, it is science that also shows humans to be firmly connected with the living world, for example with Darwin's theory of evolution, and more recently with comparison of the genomes of humans with other species and the discovery that the human body comprises ten times as many microbial cells as human cells. However, the beliefs and assumptions we have discussed above predominate, and together they form a particularly environmentally toxic worldview.

Conflicts, dilemmas and paradoxes

All of us in the West are thoroughly implicated in the climate change crisis. In modern, technologically saturated societies we are completely dependent on the systems which bring energy to our kitchens and food to our shops, transport us to work, dispose of our waste, and

so on. Under neoliberal capitalism, markets infiltrate everything, getting right underneath our skin, converting more and more aspects of life into calculation and exchange. And with globalisation the middle classes find their friends, colleagues and loved ones increasingly spread across the world. To 'drop out' of this system is virtually impossible and the vast majority of us, even those very 'climate aware', have to act for the best when faced with a myriad daily choices regarding how we travel, eat, communicate, socialise, love, relax and work. We also live in an increasingly plural society in which thousands of different voices clamour for our attention, drawing upon our different identities. Annie, an older, Welsh nationalist, conservationist, rugby-loving, Presbyterian, middle class, socialist, mother of three will be pulled this way and that by the many moral claims she feels are made upon her by all the different communities that she belongs to. According to the political philosopher Bonnie Honig, today we in the West live in 'dilemmatic space' in which there is often no obvious right thing to do (Honig 1996).

Take the dilemma of 'love miles', for example. Say Annie's only daughter now lives in Australia and is the mother of Annie's only two grandchildren. No matter how 'climate aware' Annie might be, no matter how conscious of the carbon emissions incurred by flying to the other side of the world, the 'pull' for her to go and see her family will be enormous. Whichever choice she makes she will be haunted by the loss and guilt incurred by the 'path not chosen', something the moral philosopher Bernard Williams referred to as 'the remainder' (Williams 1981).

A psycho-social perspective

Drawing attention to the conflicts and dilemmas that we all face as ethical beings in modern societies also enables us to understand something about what it means to be human. Rationalist models of the person that still dominate most academic psychology tend to adhere to a unitary view of the human subject. In contrast, a psycho-social perspective understands the human subject as always in tension, between conflicting needs, and between competing moral claims. It follows that, far from there being a unitary self which 'acts' and 'chooses', each of us is torn between a number of competing selves and identities, for example, between a complacent and entitled self on the one hand and a concerned and loving self on the other. And the problem for us all is that it is not at all easy no know which part of us is being complacent and entitled, and when. For example, if Annie decides not to go to Australia, is this because her concerned and loving self has triumphed or is there something cold and

unfeeling about her decision? And by not going, is it possible that her entitled self has actually triumphed, one which views her as an exceptionally moral person, perhaps saintly in her forbearance of ordinary pleasures?

To reiterate the point made by Bernard Williams, in a complex, plural society there is often no obviously right thing to do; all we can do is 'act of the best' as he puts it, knowing that we might be wrong but not allowing knowledge of our fallibility to undermine our capacity to act in what we feel is the right and ethical way. Understanding the person in all their complexity provides us with a sound platform for engaging with others in conversations about climate and ecological crisis.

Knowing that we are no different to the other we seek to influence and change puts us in a more humble position from which to engage, and this in turn lessens the likelihood that the other will become defensive and increases the likelihood that we might both engage in a richer conversation about our predicament.

Psychological resources

Climate change constitutes a profound psychological challenge to all of us. It does this in two ways. First, awareness of climate change itself, its already occurring impact and the severe threat it poses to our collective future, can and often does feel quite overwhelming, and this is as true for the ordinary person in the street as it is for a climate scientist (Hoggett and Randall 2018). Secondly, the actual impacts of climate change, including drought, wildfires, floods and storms and rising sea levels, often challenge both our physical and psychological wellbeing. Climate change threatens us with experiences that are difficult to contain and unless we build up our resilience these will be potentially traumatic.

Resilience

Much of the research on resilience derives from studies of families living in extreme poverty and social deprivation. These are sometimes referred to as 'traumatogenic environments' because the multiple stressors (poverty, drugs and alcohol, violence, social breakdown) combine to create an environment which constantly overwhelms peoples' psychological resources. This research has now become incorporated into fields including development

studies, social policy, genetics, health, education and disaster studies (Mohaupt 2008; Luthar et al. 2000).

One of the most significant concerns is that there is currently no single definition of resilience. One commonly used definition (Luthar et al. 2000: 10) is that resilience is a "dynamic process encompassing positive adaptation within the context of significant adversity". There must have been exposure to significant threat or severe adversity and the achievement of positive adaptation, despite major assaults on the developmental processes. But debate, for instance, surrounds the idea of what constitutes 'positive adaptation' and therefore whether in some circumstances resilience might include aggressive, deviant and what some might see as 'anti-social' behaviour.

Mentalisation

The literature on trauma, stress and coping highlights the personal resources crucial to human adaptation. A vast and varied body of literature on child development, adult mental health and personal self-help is dedicated to cultivating psychological resources to build resilience and support personal change. Psychotherapies, counselling, mindfulness practice - there are many ways we can intervene to help ourselves and others. Much of this knowledge can be usefully drawn upon to help us engage in a productive way with the conflicts, dilemmas, threats and impacts of ecological crisis.

Core to these approaches is the capacity for 'mentalisation' – bringing what was operating in the dark into the light where it is visible and can be examined, reflected upon, contained and regulated (Fonagy et al. 2002). In relation to trauma this involves the ability to get a distance from the disturbing experience without disassociating from it, and this can be enhanced by being able to deploy perspective: seeing things in a different way and from another point of view. The role of a trusted other – an individual, family or group – can be crucial in this process, and this shows us is that resilience is as much a relational phenomenon as it is something 'belonging' to the individual.

Transformational resilience

Thinking about resilience as a property of a social system takes us to the concept of 'transformational resilience' (Doppelt 2016), which can be applied to both individuals and communities in terms of their capacity to adapt to the impacts of climate change. Here,

adversity is used as a catalyst for finding new meaning and direction in life, and changes are made that increase individual and community wellbeing above previous levels (Doppelt 2016). This is a particularly powerful way of thinking about how to deal with traumatic experiences and is already being used in northern Californian communities affected by wildfires.

Radical hope

Despair and powerlessness go together. If people feel that they have some power in a situation they are less likely to feel despair. Ultimately despair comes from the feeling that you simply don't have the resources (e.g. the determination, the courage, the knowledge, the skill, the support from others) to do anything about the destruction all around you. Despair is a form of inner defeat. But strangely enough, hopelessness does not necessarily lead to despair - it can be liberating.

The social critic Christopher Lasch once said that the worst is what the hopeful are always prepared for. The hope that comes from being able to face the worst is an enduring hope because it is not built upon a scaffolding of illusion and wishful thinking. It is defiant and courageous and it refuses to capitulate to what might seem like hopeless odds. "Active hope is something we do rather than have", so say Joanna Macy and Chris Johnstone in their book Active Hope, and this is exactly what the Italian Marxist Antonio Gramsci meant by 'optimism of the will', that resilient 'keeping on going on'. It is also the kind of hope canvassed by John Foster in the concluding chapter of this book, where he links its possibility for us in present conditions to a renewed capacity to recognise our situation as tragic – a recognition which, as Nietzsche knew, is actually the reverse of fatalism.

We can't know what the future holds. When people begin to emerge from the ruins of a life, they can see painfully what has been lost, but ahead is only an uncharted sea. But move on they do, and some kind of elemental confidence about life is slowly restored. In his book Radical Hope: Ethics in the Face of Cultural Devastation Jonathan Lear depicts a whole community, the Crow Indian in late nineteenth-century North America, coming to terms with the tragic destruction of a way of life and imagining a new future for themselves. Lear calls this 'radical hope': hope is directed towards a "future goodness of the world that transcends the current ability to understand what it is" (2006, 103). Radical hope is not just about

determination and courage; it is also about love and a re-finding of all that is benign in the world.

Conclusion

Climate psychology aims to gain insight into the conundrum of why ecologically maladaptive behaviours persist in the face of compelling evidence that these behaviours are dangerous to life. With a focus on the role of the non-rational and unconscious in human cognition and decision-making, and an appreciation of the fundamental entanglement of psychological processes with social and contextual forces, climate psychology brings perspectives often overlooked by mainstream psychology. In this chapter we have introduced some core ideas: the role of emotions and how feelings are both personally felt and collectively organised; that ecological and climate crisis poses psychological threat and ways of coping can be adaptive or maladaptive; that there are cultural beliefs and assumptions that drive ecologically damaging practices and inhibit effective change; and that conflicts, dilemmas and paradoxes are inherent to being human. Finally we discussed psychological resources that can help build resilience and support positive change at individual, community and societal levels.

We are embedded in a cultural worldview that is fundamentally pathological, and it affects all of us. Acknowledging the conflicts and dilemmas that we all face as ethical beings in modern societies enables us to understand something about what it means to be human. None of us are completely right or completely wrong in the way we are responding, and the humility such a realisation engenders may help us relate to one another with more compassion and forgiveness.

References

Andrews, N. 2016. “Bill McKibben is wrong: humans and nature are not ‘at war’”cultureprobe, August 18. https://cultureprobe.wordpress.com/2016/08/18/bill-mckibben-is-wrong-humans-and-nature-are-not-at-war/

Andrews, N. 2017. “Psychosocial factors influencing the experience of sustainability professionals.” Sustainability Accounting, Management and Policy Journal 8: 445–469.

American Psychological Association. 2009. *Psychology & Global Climate Change: addressing a multifaceted phenomenon and set of challenges*. Washington DC: American Psychological Association.

Bateson, G. 1982. Steps to an Ecology of Mind. Reprint 1987. Northvale, New Jersey: Jason Aronson.

Bion, W. 1962. *Learning From Experience*. London: Heinemann.

Clayton, S, P. Devine-Wright, P. C. Stern, L. Whitmarsh, A. Carrico, L. Steg, J. K Swim, and M. Bonnes. 2015. "Psychological Research and Global Climate Change." *Nature Climate Change* 5 (7): 640–46.

Coser, L. 1961. "Introduction". In *Max Scheler: Ressentiment*. New York: The Free Press.

Cramer, P. 1998. "Coping and Defense Mechanisms: What's the Difference?" *Journal of Personality* 66 (6): 919–946. doi:10.1111/1467-6494.00037.

Crompton, T., and T. Kasser. 2009. *Meeting Environmental Challenges: The Role of Human Identity*. Godalming, UK: WWF-UK.

Diamond, J. 2005. *Collapse: how societies choose to fail or succeed*. New York: Viking Press.

Doherty, T.J. and S. Clayton. 2011. "The psychological impacts of global climate change." *American Psychologist*, 66(4): 265-276.

Doppelt B. 2016. *Transformational Resilience: How Building Human Resilience to Climate Disruption can Safeguard Society and Increase Wellbeing*. London: Routledge

Fonagy, P, G. Gergely, E.L. Jurist, and M. Target. 2002. *Affect Regulation, Mentalization and the Development of the Self*. New York: Other Press

Frantz, C.M, F.S. Mayer, C. Norton, and M. Rock. 2005. "There is no I in nature: the influence of self awareness on connectedness to nature." *Journal of Environmental Psychology*. 25(4): 427-436.

Fritsche, I. and K. Häfner. 2012. "The malicious effects of existential threat on motivation to protect the natural environment and the role of environmental identity as a moderator." *Environment and Behaviour.* 44(4): 570-590.

Goodwin, J, J. Jasper, and F. Poletta eds. 2001. *Passionate Politics.* Chicago: Chicago University Press.

Gould, D. 2009. *Moving Politics: Affect, Emotions and Shifting Political Horizons in the Fight Against AIDS*. Chicago: Chicago University Press.

Griffin, S. 1995. *The Eros of Everyday Life: essays of ecology, gender and society*. New York: Anchor Book/Doubleday.

Hamilton, C. 2010. *Requiem for a species: why we resist the truth about climate change.* London: Earthscan.

Head, L. 2016. *Hope and grief in the anthropocene. Reconceptualising human nature relations*. Routledge: London.

Hoggett, P. 2009. *Politics, Identity and Emotion*. Boulder, Col: Paradigm Publishers.

Hoggett, P. and R. Randall. 2018. "Engaging with climate change: Comparing the cultures of science and activism." *Environmental Values,* 27: 223-243.

Honig, B. 1996. "Difference, dilemmas and the politics of home." In *Democracy and Difference: Contesting the Boundaries of the Political,* edited by S.Benhabib. Princeton, NJ: Princeton University Press.

IPCC. 2014a. *Climate Change 2014 Impacts, Adaptation, and Vulnerability Part A: Global and Sectoral Aspects. Working Group II Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. New York, NY: Cambridge University Press.

IPCC 2014b. *Climate Change 2014 Mitigation of Climate Change. Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. New York, NY: Cambridge University Press.

Isildar, G. 2012. Introduction to environmental ethics. In *Environmental ethics: an introduction and learning guide*, edited by K.Vromans, R. Paslack, G. Isildar, R. de Vrind and J. Simon. Greenleaf.

Jasper, J. 1998. "The emotions of protest: Affective and reactive emotions in and around social movements." *Sociological Forum,* 13 (3): 397-424.

Kanner, A. D., and Gomes, M. E., 1995. The all-consuming self. In: *Ecopsychology: Restoring the earth, healing the mind*, edited by T. Roszak, M.E. Gomes and A. D. Kanner, 77-91. San Francisco: Sierra Club Books.

Klein, N. 2014. *This Changes Everything: capitalism vs. the climate*. New York: Simon & Schuster.

Lasch. C. 1979. *Culture of Narcissism: American life in an age of diminishing expectations*. New York: W.W. Norton & Company.

Le Bon, G. 1896. *The Crowd: A Study of the Popular Mind.* London: T.F.Unwin.

Lertzman, R. 2015. *Environmental Melancholia*: *Psychoanalytic Dimensions of Engagement*. London: Routledge

Luthar, S., D. Cicchetti, and B. Becker. 2000. "The construct of resilience: A critical evaluation and guidelines for future work." *Child Development* 71 (3): 543-562.

Macy, J. 1993. *World as Lover, World as Self.* Berkeley: Parallax Press.

Midgley, M. 2003. *Myths We Live By*. London: Routledge.

Mohaupt, S. 2008. "Review article: Resilience and social exclusion." *Social Policy and Society,* 8 (1): 6 -71.

Randall, R. 2013. "Great Expectations: The Psychodynamics of Ecological Debt." In *Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives*, edited by S. Weintrobe, 87–102. Hove, UK: Routledge.

Rust, M. 2008. "Climate on the couch." *Psychotherapy and Politics International,* 6(3): 157-170.

Shapiro, S.L. & Schwartz G.E.R., 1999. "Intentional systemic mindfulness: an integrative model for self- regulation and health." *Advances in Mind-Body Medicine*. 15: 128-134.

Schwartz, S. H., J. Cieciuch, M. Vecchione, E. Davidov, R. Fischer, C. Beierlein, A. Ramos, et al. 2012. "Refining the Theory of Basic Individual Values." *Journal of Personality and Social Psychology* 103 (4): 663–688. doi:10.1037/a0029393.

Sheldon, K. M., and T. Kasser. 2008. "Psychological threat and extrinsic goal striving." *Motivation and Emotion,* 32: 37-45.

Solomon, S., J.L. Greenberg, and T.A. Pyszczynski. 2004. Lethal Consumption: death-denying materialism. In: *Psychology and Consumer Culture*, edited by T. Kasser and A.D. Kanner, 127-146. Washington DC: American Psychological Association.

Swim, J.K., P.C. Stern, T.J. Doherty, S. Clayton, J.P. Reser, E.U. Weber, R. Gifford. and G.S. Howard. 2011. “Psychology’s contributions to understanding and addressing global climate change.” *American Psychologist*, 66: 241-250.

Totton, N. 2011. *Wild Therapy*: *undomesticating inner and outer worlds.* Ross-on-Wye: PCCS Books.

Weinstein, N., K.W. Brown, and R.M. Ryan. 2009. “A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being.” *Journal of Research in Personality,* 43: 374-385

Weinstein, N. and R.M. Ryan.2011. “A Self-determination Theory Approach to Understanding Stress Incursion and Responses.” *Stress and Health,* 27: 4-17

Weintrobe, S. 2004. “Links between grievance, complaint and different forms of entitlement.” *Int. J. Psycho-Anal,* 85 (1): 83-96.

Weintrobe, S., ed. 2013. *Engaging with Climate Change: Psychoanalytic and Interdisciplinary Perspectives.* Hove, UK: Routledge.

White, L. 1967. “The historical roots of our ecological crisis.” *Science,* 155 (3767): 1203–1207.

Williams, B. 1981. *Moral Luck: Philosophical Papers 1973-1980.* Cambridge University Press.

Wright, R. 2004. *A Short History of Progress*. Edinburgh: Canongate Books.

Wright, C. and D. Nyberg. 2015. *Climate change, capitalism, and corporations: processes of creative self-destruction.* Cambridge: Cambridge University Press.