Are Environmentalists and Climate Scientists in Denial?

Climate change recognized as primarily a psychological challenge

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Produced in memory of the neglected "human" dimension implied by the original United Nations Conference on the Human Environment (Stockholm, 1972)

Introduction

The key to any viable strategic response to the planetary environmental tragedy is as much a psychological matter as one of constraining carbon emissions and other excesses. This was originally recognized to some degree in the UN Declaration on the Human Environment (Stockholm, 1972), but was no longer held to be significant in the establishment and subsequent operation of the United Nations Environment Programme (UNEP), especially with respect to its psychosocial implications.

Much is made by environmentalists and climate scientists of the degree to which others are "in denial". The question here is whether those groups have the right to use the term, since it relates to insights outside their respective domains. Essentially, with respect to their areas of expertise, they lack any formal qualifications to refer to that phenomenon - being a matter for the appropriately qualified social sciences, for which historically they have little regard.

From the perspective of the relevant social sciences, can it then be said that, being "in denial", environmentalists are projecting onto those who disagree with them a condition from which they themselves are suffering? Again, neither "projection" nor "suffering" are phenomena which are comprehensible or meaningful to those engaged in such projection.

Given the manner in which the "disconnect" from nature is now widely noted and deplored, it can be argued that those preoccupied with the natural environment have lost the capacity to communicate meaningfully with humans. Given the suppression of "human" from the title of the United Nations Environment Programme, the situation could be caricatured as one of the "chickens coming home to roost".

This argument can be readily framed as trivial and irresponsible in the light of the gravity of the planetary condition - at a time when those most sensitive to it are calling for "action now". Potentially worse however is the manner in which many are reinforced in the belief that someone else is responsible and should be immediately called upon to act (Responsibility for Global Governance Who? Where? When? How? Why? Which? What? 2008). Those failing to act are readily condemned, in principle if not in practice.

It is of course the case that "action" and "responsibility" by collectivities are not concepts which are defined in any relevant manner by the natural sciences with respect to the environment. It could be argued that until environmentalists understand how they are part of the problem, they will be unable to understand the nature of the viable solution required. This concern follows from a previous framing of the challenge, using a different form (64 Questions for the Environmental Conservationists of the World -- raising the question as to why they are not effectively addressed, 2017).

In the spirit of the communication challenges posed by this argument, a psychosocial case study is presented separately (Enrolling...
Winnie-the-Pooh’s Companions in Climate Change Discourse: key roles in the environmental psychodrama of Hundred Acre Wood, 2019).

Blaming opponents in environmental discourse

Together we seem to have created a situation in which those sensitive to the tragic condition of the planet are necessarily “right” in urging others to act in response to such insights (Edward de Bono, I Am Right, You Are Wrong — From This to the New Renaissance: From Rock Logic to Water Logic, 1991). Those who fail to respond to their exhortations are then necessarily “wrong” and may merit appropriate sanctions.

The dynamic recalls priestly references from the pulpit with regard to "hell fire" and "eternal damnation" - ironically appropriate metaphors, given the current planetary condition. The framing is however no more helpful than have been the priestly diatribes on moral and ethical issues (Collective Mea Culpa? You Must be Joking! Them is to blame, Not us! 2015).

It would seem appropriate to learn from that historical track record that exhortation, however it is held to be justified, can be readily recognized as strategically naive. This argument framed a critique of a recent report, presented as part of the 50th anniversary celebrations of the Club of Rome, by Ernst von Weizsaecker and Anders Wijkman to the Club of Rome: Come On! Capitalism, Short-termism, Population and the Destruction of the Planet (2018). The critique was entitled: Exhortation to We the Peoples from the Club of Rome (2018). The insight of George Santayana would seem to be appropriate: Those who cannot remember the past are condemned to repeat it.

Criticism of the general public by environmentalists with respect to plastic waste, for example, also merits reflection in the light of the track record of environmental scientists with regard to waste on Antarctic research stations, to nuclear waste, and to rapid accumulation of space debris -- all of which are beyond the purview of the general public. What is to be said of the systematic tagging of wildlife with respect to the consumption of such animals by their predators -- thereby entering the foodchain?

Part of the difficulty is that the intangible nature of blame is that it is not a process which can be readily recognized within the natural sciences. From that perspective, this presumably allows innocence to be claimed, and impunity to be considered natural.

The capacity of environmentalists to blame the public in any way could well be reconsidered in the light of the proverb: Those who live in glass houses should not throw stones.

Outside-Inside environmental complementarity

An alternative argument, seldom explored, is that the key to any response to environmental issues is as much “inside” as “outside”, as argued separately (World Introvovation through Paracycling: global potential for living sustainably “outside-inside”, 2013).

The issues are far less “external” than the natural sciences would like to claim, given their particular bias. They are as much “internal” - if the will to change is to be engendered -- although the natural sciences are potentially valuable in enabling such reflection. How is the “will to change” to be understood by the natural sciences? Engendering it has long been a challenge (International Organizations and the Generation of the Will to Change, 1970).

Is it then a strategic error to assume that any appropriate response is necessarily “external” rather than “internal”? Would that constitute an example of misplaced concreteness? This is a well-recognized cognitive fallacy for some of the social sciences, but necessarily beyond the scope of most natural sciences -- although the writing could be said to be on the wall (Alexander Wendt, Quantum Mind and Social Science: unifying physical and social ontology, 2015).

If environmental issues merit recognition in psychological terms, how should strategic priorities then be reconsidered? If global climate change is a global psychological problem - to an important degree -- how then to engage with it?

In contrast to a purely scientific approach, a valuable framework for consideration is offered by the deliberative politics articulated by Jürgen Habermas, as discussed by Emilie Pratico (Habermas and Climate Action, Aeon, 18 December 2019). However any call for appropriate discourse tends to reinforce the psychological question as to why it seldom occurs in practice -- whatever the strength of the argument.

Metaphorical clues to reframing the climate challenge

Curiously some clues are evident in the recognition of the degree to which people have become "disconnected" from nature - whatever that may be held to mean. It is now explored as a pathological condition "nature deficit disorder" (Richard Louv, The Nature Principle: human restoration and the end of Nature-Deficit Disorder, 2011; Elizabeth Dickinson, The Misdagnosis: Rethinking "nature-deficit disorder", Environmental Communication: a Journal of Nature and Culture, 2013).

There is a quest for relevant metaphors, as argued by Margaret Klein Salamon (Best Metaphors for the Climate Crisis, The Climate Psychologist, 23 October 2013; with comments). Understanding of such metaphors has been variously reviewed:

- Alice Deignan, Elena Semino and Shirley-Anne Paul: Metaphors of Climate Science in Three Genres: research articles, educational texts, and secondary school student talk (Applied Linguistics, 40, 2019, 2)
- George Lakoff: Why it matters how we frame the environment (Environmental Communication, 4, 2010, pp. 70-81)
Kaya Identity, and what else?

This criticism was highlighted in a commentary on Group III Assessment Report. Is the population being lied to in some natural scientists - For example, rare are the civilization? the manner in which humanity is The planetary tragedy can be explored Cultivating the effects of conscious This is part of the tragedy since the There is a sense in which society offers itself a vast array of insights - but in metaphorical terms which can be only too readily ignored (Metaphorizing Dialogue to Enact a Flow Culture: transcending divisiveness by systematic embodiment of metaphor in discourse, 2019). This is part of the tragedy since the environment is much valued as a source of metaphor, most notably by poets.

For example, the biologist/anthropologist Gregory Bateson, in explaining why "we are our own metaphor", pointed out to a conference on the effects of conscious purpose on human adaptation that:

One reason why poetry is important for finding out about the world is because in poetry a set of relationships get mapped onto a level of diversity in us that we don't ordinarily have access to. We bring it out in poetry. We can give to each other in poetry a set of relationships get mapped onto a level of diversity in us that we don't ordinarily have access to. We bring it out in poetry. We can give to each other in poetry

Cultivating the environmental "Big Lie"?

The planetary tragedy can be explored otherwise. If denial is freely attributed to those who disagree, is there then a case for recognizing the manner in which humanity is carefully cultivating and indulging in a "Big Lie"? How might such a lie be cultivated unknowingly by charismatic environmentalists? (Existential Challenge of Detecting Today's Big Lie: mysterious black hole conditioning global civilization? 2016). Discourse on climate change can be seen as offering examples of this:

- Papal Concern for Climate Change and Refugee Care: a means of concealing criminal systemic negligence? (2015)

For example, rare are the environmentalists who suggest that overpopulation is a factor in the current human tragedy - especially now that any action on that matter is already "too late" and is framed as irrelevant. The overpopulation argument vigorously opposed by natural scientists - especially when suitably funded, as with respect to related issues (Naomi Oreskes and Erik M. Conway, Merchants of Doubt: how a handful of scientists obscured the truth on issues from tobacco smoke to global warming, 2010).


At the global scale, declining carbon and energy intensities have been unable to offset income effects and population growth and, consequently, carbon emissions have risen.... The challenge … is daunting. It presupposes a reduction of energy and carbon intensities at a faster rate than income and population growth taken together. Admittedly, there are many possible combinations of the four Kaya identity components, but with the scope and legitimacy of population control subject to ongoing debate, the remaining two technology-oriented factors, energy and carbon intensities, have to bear the main burden.... [emphasis added]

This criticism was highlighted in a commentary on Uncritical Strategic Dependence on Little-known Metrics: the Gaussian Copula, the Kaya Identity, and what else? (2009). This noted the problematic consequences of unthinking dependence on the Gaussian Copula which
gave rise to the subprime mortgage crisis. Are there features of the "climate crisis" which are unrecognized as a consequence of a similar blindspot?

**Failure of climate scientists to enable appropriate expertise on "care fatigue"?**

Overcrowding in any form may indeed be irrelevant, despite indications to the contrary (Local Reality of Overcrowding -- Global Unreality of Overpopulation, 2018). As a metaphor it does however offer insights into the sense in which people are "overcrowded" by many preoccupations - otherwise understood as information overload. Why should people accord credibility and priority to proponents of one concern - who consider other preoccupations to be relatively irrelevant?

More problematic is the sense in which many are over-exposed to appeals for urgent action - most notably of a humanitarian nature characterized by tragic suffering. There is however increasing recognition of "care fatigue" and "psychic numbing" (Starvation Imagery as Humanitarian Trump Card? Counterproductive emotional blackmail engendering worldwide indifference, 2016). If the urgency of climate action becomes conflated with such resistance, with what insights will environmentalists reframe their strategy?

If the strategic opportunities of collective response to the environmental challenges are to some degree psychological, where is this possibility considered (Recognizing the Psychosocial Boundaries of Remedial Action: constraints on ensuring a safe operating space for humanity, 2009).

Where is the research on this option - before collective indulgence in a knee-jerk switch to geoengineering ("climate engineering") is justified by the natural sciences (Geo-engineering Oversight Agency for Thermal Stabilization -- GOATS, 2013)?

**Strategic viability of environmental action?**

From this perspective, vigorous demonstrations in support of "climate action now" are indeed heart-warming and much to be admired. What action, however - and how tokenistic can it be made by institutions thereby forced to act against their will? A sobering insight in this regard is that of one proponent of change, namely management cybernetician Stafford Beer:

Reformers, critics of institutions, consultants in innovation, people in short who 'want to get something done', often fail to see this point. They cannot understand why their strictures, advice or demands do not result in effective change. They expect either to achieve a measure of success in their own terms or to be flung off the premises. But an ultra-stable system (like a social institution)... has no need to react in either of these ways. It specializes in equilibrail readjustment, which is to the observer a secret form of change requiring no actual alteration in the macro-systemic characteristics that he is trying to do something about. (Chairman's Address to the International Cybernetic Congress, 1969)

The challenge is articulated in other terms by Max St. John:

What I want to tell you is that the anxiety we're producing for ourselves -- while it feels very much justified -- could be a symptom of everything we've been doing 'wrong' and is making things worse. And the alternative isn't inaction but instead wiser action. (Why We all Need to Stop Worrying about Climate Change (and What to Do Instead), Resilience, 15 May 2019)

Witch doctors have always been skilled in pointing to disasters to justify their arguments. Are environmentalists now functioning as "which doctors"? (I. L Briskman, Doctors and witchdoctors: which doctors are which? British Medical Journal, 295, 1987, 6605).

**Biodiversity as a metaphor for psychosocial diversity?**

The argument implied here is in favour of a subtler approach which neither environmentalists nor activists have been prepared to consider. They could well remember the lessons regarding conventional calls for action and their consequences (Collective Learning from Calls for Global Action, 1981).

Environmentalists have been remarkable in rendering comprehensible the riches of biodiversity and its current vulnerability. Beyond their preoccupations, global civilization is faced with multiple tensions and vulnerabilities with respect to what might be termed psychosocial diversity. Like it or not, these may be held to be of greater relevance by many. How is it that loss of "biodiversity" has become a matter of legitimate concern (at least for the nature sciences), but that the increase or decrease of "psychodiversity" are perceived as especially problematic?

Missing is an extension of the systemic insights of climate science to encompass the problematic dynamics of the psychosocial system - in appropriate collaboration with those with insights into their nature. The question as to why this situation prevails goes to the heart of any meaningful response to the challenges of "climate change" - whether natural or psychosocial.

Whilst there is indeed an inconvenient truth about "climate change", is there an inconvenient truth about such an inconvenient truth, as may be argued (An Inconvenient Truth -- about any inconvenient truth, 2008)? Could environmentalists be understood as adopting a deprecated religious strategy with respect to topics they find inconvenient (Institutionalized Shunning of Overpopulation Challenge: incommunicability of fundamentally inconvenient truth, 2008).

**Action Now: insights from Greta Thunberg, Krishnamurti and Julian Assange as leaders of religions?**
Reaction to a new "religion"? From the psychosocial systemic perspective, naively neglected by environmentalists, Climate Activism can be usefully compared with a new religion -- something to believe in urgently, as being vital to the salvation of the planet. Those failing to do so, or acting otherwise, are then necessarily to be condemned. The quest for sustainability has been a religion similarly framed -- climate activism could even be understood as a break-a-way religion, as is typically evident in the history of religions.

As a religion, Climate Activism may be expected to evoke its own particular schisms and opponents -- as with the Protestant response to the acclaimed truth of the Catholic understanding, or the current violence between Sunni and Shia in Islam. Systemically each undermines the other, despite the fundamental truths they variously claim to share and uphold.

It is then to be expected that Greta, as the widely acclaimed prophet of Climate Activism, will be subject to questionable criticism, as is evident:

- Stephen Johnson: Greta Thunberg faces right-wing media attacks after U.N. speech (25 September, Big Think, 2019)
- MSM wants angry male incels to just SHUT UP and agree with Greta -- or else be shamed into it (RT, 28 September 2019)
- Nick Gillespie: Think Globally, Shame Constantly: the rise of Greta Thunberg environmentalism -- her future, and that of the planet, hasn't been "stolen" and the best way forward is through serious policy discussion, not histrionics (Reason, 24 September 2019)
- Ryan Saavedra: Critics Lambast Melodramatic Greta Thunberg Speech As 'Child Abuse' (Daily Wire, 24 September 2019)
- Stephen Buranyi: Greta Thunberg's enemies are right to be scared: her new political allies should be too (The Guardian, 30 September 2019)
- Amanda Vanstone: The Greta Thunberg circus has become a complete farce (The Sydney Morning Herald, 26 September 2019)

A familiar pattern -- including the expectation of each that their "truth will triumph"? Do environmentalists have any systemic insights to offer -- if not, why not? Some relevant insights from a psychological perspective are offered by George Monbiot (Start Making Sense, 4 October 2019), specifically noting the protocol for activism developed by Extinction Rebellion -- seemingly a model of good political psychology.

As part of the initiative of the 300-outlet global coalition Covering Climate Now, The New Republic in the USA -- in anticipation of "ramping up" its own coverage -- has undertaken an email campaign with the subject line: Why Greta Thunberg makes politicians squirm. The key question is however what happens "post-squirm". Arguably it is "squirming" that politicians do best in order to avoid effective action (The Art of Non-Decision-Making -- and the manipulation of categories, 1997; Emily Maitlis, Getting a straight answer from politicians in 2019 has become noticeably and increasingly difficult, The Guardian, 5 October 2019).

It is one thing to call for "action now" and another to know what token response it is likely to evoke by those who specialize in squirming their way out of such embarrassment. As every teenager knows, the art is to determine how little can be done to claim adequacy of response to any parental demand. Circumventing that strategic default is then quite another matter entirely (Reframing the Art of Non-Decision-Making; conceptual gerrymandering on a global scale, 2017). Do teenagers have insights in that regard?

Resistance: There is, for example, the much discussed phenomenon of the resistance of modern teenagers to doing what parents consider appropriate. There is now seemingly the ironic mystery of why the older generation now acts in a manner which young climate activists consider inappropriate? Seemingly the appropriateness-resistance complex merits greater insight in relation to the much-cited political "will to change" (Comprehension of Appropriateness, 1986; International Organizations and the Generation of the Will to Change, 1970; Mobilization for Alienation vs. Catalysis for Participation: the critical choice for the United Nations system, 1973).

In commenting on the response to Greta, the challenge is useful framed by Sasha Brown-Worsham (Strong, smart teen girls have had enough; no wonder men like Trump are rattled, The Guardian, 1 October 2019):

As the mother of a teenage girl myself, I know how hard they are to manipulate. They are strong and smart and know themselves in ways big and small. They can't be forced by anyone -- not teachers or parents -- to say things they don't mean at a school assembly, let alone on world stage.

Missing again is attention to what happens thereafter. Whether parents are "rattled" by teenage behaviour, or leaders are "rattled" by climate protest, it is far from clear that this leads to a fruitful outcome. Parents and leaders tend to adapt as they can; teenagers may yearn for the opportunity to "leave home", possibly to take on parental responsibilities. Engendering divided families has yet to address the issue.

With respect to leaders, climate activism is likely to discover "how hard they are to manipulate" -- more parent-teenager games with nothing new? Greta Thunberg has already engaged in problematic exchanges with several of the world's "big daddys":

- Veronica Scrofulchus: Trump mocks teenage climate activist Greta Thunberg (CNN, 25 September 2019)
- Joan E Greve: Greta Thunberg turns tables on Trump and quotes his mockery in new Twitter bio (The Guardian, 24 September 2019)
- Aaron Rupar: Trump's tweet about Greta Thunberg is one of his ugliest yet (Vox, 24 September 2019)
- Vladimir Soldatkin: Putin: I don't share excitement about Greta Thunberg's U.N. speech (Reuters, 2 October 2019)
- "Kind but poorly informed teenager": Greta Thunberg targets Putin in latest Twitter bio update (RT, 4 October 2019)
Stafford Beer's cybernetic insight, as cited above, still comes into play. Rather than conventional calls for "mobilization" in martial terms, are there other systemic insights required which could prove more appropriate (Ensuring Strategic Resilience through Haiku Patterns: reframing the scope of the "martial arts" in response to strategic threats, 2006)?

Unforeseen counter-trends? Missing is any understanding of the truth of those who are alienated by any such articulation. How do they fit into the system -- given that neither the religions nor the political ideologies have ever been able to comprehend this, or to transcend their own violently competitive dynamics? Will Climate Activism follow the pattern of Communism or Fascism -- or a Christian denomination, like the Seventh-Day Adventists, or maybe the Amish? Are existing web references to "Klimat Jugend" already to be considered of concern, given such associations and the lack of critical perspective? What would prevent the development of an ecofascist logic attractive to the young?

- Jason Wilson: Eco-fascism is undergoing a revival in the fetid culture of the extreme right (The Guardian, 19 March 2019)
- Louis Proyect: How Real is the "Eco-Fascist" Threat? (CounterPunch, 9 August 2019)
- Sarah Manavis: Eco-fascism: the ideology marrying environmentalism and white supremacy thriving online (New Statesman, September 2018)
- Max Ajl: Eco-Fascisms and Eco-Socialisms (Verso, 12 August 2019)
- Lynn Wang: Worse Than Climate Denial: climate denial is giving way to an even uglier monster: eco-fascism (The Trouble, 16 June 2019)
- James Dellingpole: The Little Green Book of Eco-Fascism: the plan to frighten your kids, drive up energy costs and hike your taxes! (Biteback, 2014)

Speaking truth to power: Given Greta's youth, further systemic insight could be derived from the forgotten grooming of Jiddu Krishnamurti as the new World Teacher -- hailed as the Star in the East a century ago, whilst still an adolescent. Is Greta now to be recognized as the "Star in the West"?

Lessons of another kind could be derived from the tragedy of Julian Assange -- as the vehicle of a message of truth of different urgency for the planet. Both Greta and Krishnamurti have been framed as speaking "truth to power". Julian is however to be seen as exemplifying the shame of Swedish society, just as Greta exemplifies its glory. The tale of Greta and Julian is further interwoven through the role of the USA, as the prime denier of climate change and the prime cause of Julian's brutal imprisonment (Chris Hedges, The Coming Show Trial of Julian Assange, Common Dreams, 17 June 2019).

Being part of the problem? Why are some alienated by the particular articulation of a salvatory message -- by a new dissemination of "the truth"? Why are some alienated by its presentation -- and by those who promote themselves thereby -- rather than by the focus of the message? Is it a case of: If one does not understand how one is part of the problem, one cannot understand the nature of the solution required?

Could Greta follow the path of Krishnamurti and abandon the mantle? Could Julian seek to fulfil his role in the psychodrama, as speculatively explored (Trial of Julian Assange -- Who is the Pontius Pilate of Easter 2019?). With environmentalists ignoring the lessons of history, the insight of George Santayana becomes relevant, as noted above: Those who cannot remember the past are condemned to repeat it

Psychology of climate change denial

There is an accumulation of references purporting to offer insight into the psychology of climate change denial. These include indications of the variety of forms of denial. A significant proportion of these comments frame the issue in terms of why groups and individuals fail to respond to the warnings of authorities:

- Nicole Mortillaro: The psychology of climate change: why people deny the evidence (CBC News, 2 December 2018)
- Margaret Klein Salamon: The Transformative Power of Climate Truth (Climate Mobilization)
- The psychology behind climate change denial – podcast (TaylorHopkinson, 2 August 2019)

Naively this recalls the disappointed amazement at why kids do not respond to parental injunctions as the latter deem appropriate, unbelievers to the injunctions of religions, the apathetic to the advocacy of activists, political parties concerned by public appreciation of their opponents, religious believers to the rationality of scientists. The latter in particular are indicative of the issue with respect to climate change (as exemplified by resistance to vaccination).

Few comments recognize that the challenge is of a subtler nature -- more general and more fundamental, and notably of relevance to sustainable development, as separately discussed (Psychology of Sustainability: embodying cyclic environmental processes, 2002). The dynamic as yet to be clearly distinguished and explored is the manner in which a proportion of any population resists the injunctions of authorities. Somehow they reject the program and resist persuasion to "get them on board" and "with the program". Some just do not want to be "mobilized" -- is it naive to wonder why? Some may go further and seek to undermine the advocated strategy -- as religions and political ideologies do with each other, as well as those of criminal intent.
The challenge of climate change is usefully and specifically exemplified by the "antivaxer" response to measles worldwide, given the existence of an appropriate vaccine for decades. As indicated by the WHO:

Measles cases do not go down every year -- there was an increase between 2012 and 2013, for example. However, there is greater concern now that progress is being undone as the number of children vaccinated stalls around the world. The fact that any child dies from a vaccine-preventable disease like measles is frankly an outrage and a collective failure to protect the world's most vulnerable children, said Dr Tedros Ghebreyesus, director-general of the WHO. (Measles deaths 'staggering and tragic', BBC News, 5 December 2019; 142,000 died from measles last year: WHO estimates, The Guardian, 5 December 2019)

Of relevance is the inadequacy of the response -- vaccine hesitancy -- given the availability of the vaccine (at a price). More problematic is the assumption by health authorities that their assertion of the facts should be completely unquestionable (and beyond discussion), despite a track record of pressure from the pharmaceutical industry with a commitment to promoting the sale of vaccines (Sharmila Kher, WHO influenced H1N1 vaccine purchase? Experts on WHO panels did not report conflict of interest, DownToEarth, 4 July 2015; Marc Girard, WHO and the pandemic flu "conspiracies", BMJ, 2 July 2010; F. William Engdahl, European Parliament to Investigate WHO and "Pandemic" Scandal, Health-Care-In-Europe, 26 January 2010).

Of particular concern is the naivety with which warnings are declared by authorities to be "factual" -- and therefore beyond question by reasonable people. This assumption or especially naïve in a period in which it is widely recognized that authorities (and notably scientists) are mistrusted -- or merit a degree of mistrust (Stephan Lewandowsky, et al, The Subterranean War on Science, Association for Psychological Science, November 2013). Why is it assumed that some must necessarily be persuaded of the validity of "facts" in a "post-truth" epoch characterized by widespread dissemination and manipulation of fake news (Varieties of Fake News and Misrepresentation: when are deception, pretence and cover-up acceptable? 2019)

Of great potential value to these considerations is the compilation of analyses of warnings and of the response to them by Michael S. Wogalter (Handbook of Warnings, 2006).

The following references are indicative of concerns beyond the naïve -- whether to a sufficiently adequate degree, the future may yet make clear (as religions have long claimed with respect to unbelievers):

- Brandon Keim: The Psychology of Climate Change Denial (Wired, 12 September 2009)
- Kari Marie Norgaard: Climate Denial: emotion, psychology, culture, and political economy (The Oxford Handbook of Climate Change and Society, 2011)
- Carolyn Gregoire: Psychology Climate Change Denial: Why Some Conservatives Still Won't Accept Climate Change Is Real -- it's never really been about the science (HuffPost)
- Sara Gorman and Jack M. Gorman: Climate Change Denial: facing a reality too big to believe (Psychology Today, 12 January 2019)
- Kevin Casey: Why Climate Change is an Irrelevance: economic growth is a myth and sustainability is forty years too late (Global Comment, 20 November 2019)
- Rachel Riederer: The Other Kind of Climate Denialism (New Yorker, 6 March 2019)
- Kirsti Jylhä: The psychology behind climate change denial (Science News, 4 October 2016)
- Maya Sainani: Climate Change Denial - The Psychology Behind It And Its Global Impact (Brighton Peace and Environment Centre, 2019)
- Faye Flam: Climate Change Denial Isn't Limited to Science Skeptics (Bloomberg, 21 October 2019)
- What psychology experiments tell you about why people deny facts (The Economist, 8 December 2018)
- Craig Chakquist: The Psychology of Climate Change Denial: are warnings about global disaster waking people up--or numbing them out?

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<th>Pace of climate change is 'scary'?</th>
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<td>David King, former UK chief scientist, has argued for recognition of the alarming rate of climate change (Roger Harrabin, Faster pace of climate change is 'scary', former chief scientist says, BBC News, 16 September 2019). The comment notes:</td>
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<td>But the UN's weather chief [Petteri Taalas] said using words like &quot;scared&quot;; could make young people depressed and anxious. Campaigners argue that people won't act unless they feel fearful. Professor King, declared: &quot;It's appropriate to be scared. We predicted temperatures would rise, but we didn't foresee these sorts of extreme events we're getting so soon&quot;...</td>
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<td>&quot;We do the analysis, we think what's going to happen, then publish in a very scientific way. Then we have a human response to that... and it is scary.&quot;... However, some scientists appear to believe that their communications in the past have been failing to provoke an emotional response that would convince the public to act.</td>
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<td>As argued above, it is unclear that climate scientists have any mandate to use emotive language, or descriptors like &quot;scary&quot; of which they lack any appropriately qualified understanding. They have no training in how emotive responses are evoked, or on what responses lead to the kinds of action they consider appropriate. This is indicative of a complete failure in comprehending how scientific insights are communicated or given due consideration -- a failure deriving from denial of systemic dimensions of vital relevance to the crisis and any remedial response.</td>
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| Can "ecological grief" be appropriately recognized by science -- then what? |
The journal *Nature* reports on a study by social scientist Michele Barnes of the emotional experience of environmental scientists (Gemma Conroy, "Ecological grief" grips scientists witnessing Great Barrier Reef’s decline: studying ecosystems affected by climate change takes an emotional toll on researchers. *Nature*, 13 September 2019).

Such a study clearly raises questions about how natural scientists relate the conclusions of their studies to the preoccupations of populations that such scientists expect to be attentive to their insights in influencing political priorities. Following the experience, then what?

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Naomi Oreskes and Erik M. Conway. *Merchants of Doubt: how a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. Bloomsbury Press, 2010 [summary]

Emilie Pratiko. Habermas and Climate Action. *Aeon*, 18 December 2019 [text]


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