
The Monthly

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COMMENT

When planetary catastrophe is your day job

BY **Lesley Hughes**



**Climate scientists are working hard
to keep the apocalypse relevant**

The smiling young woman approaches me, hand

outstretched to shake mine. “I just wanted to say how much I enjoyed your talk,” she enthuses. I thank her warmly; I’m as grateful for a compliment as the next person. But my heart is sinking. I’ve failed, again. The “enjoyable” talk I’ve just delivered was about climate change and its impacts, now and in the future – planetary catastrophe in a 40-minute PowerPoint presentation. And now the audience is filing out, eager for a coffee or something stronger, already thinking about where to get a taxi, or what to have for dinner, or any one of a million things other than mounting a revolution to save the planet.

I give a lot of these talks – to university students, business groups, community organisations, anyone who’ll listen. I work hard to be engaging, keeping the text and complex graphs to a minimum, adding lots of pictures and analogies, personal anecdotes and even the odd joke. And therein lies the conundrum. As a scientist I feel a compulsion to deliver the facts as we currently understand them. But too much gloom and doom is paralysing. Apocalypse fatigue can send people under the metaphorical doona.

How to balance motivation and despair? Sometimes it feels like there are just as many people giving advice about how to communicate climate change as there are people gathering data on it. Reframe the problem, we are told. Talk about kids and health, not polar bears and disaster. Talk about insurance and opportunities, about being smarter, healthier, happier. Talk about now, not decades hence. Talk local, not global. And so on.

At the same time, some tell us we are not being scary enough. Ian Dunlop is a former chair of the Australian Coal Association. Having come across from the dark side with a vengeance, he is now excoriating in his criticism of Australia’s “Orwellian” climate-policy debates and the politicians who shirk their moral responsibility. In *What Lies Beneath: The Scientific Understatement of Climate Risks*, Dunlop goes even further: he and co-author David Spratt call out scientists for being too cautious in the absence of perfect data, too reticent to tell it like it is.

We’re not all so cautious. John Schellnhuber, founding director of the Potsdam Institute for Climate Impact Research, is probably the most influential climate scientist you’ve never heard of. Among other things, Schellnhuber was the guy who proposed the 2 degrees Celsius guardrail for global warming that was first adopted by the German government and the European Union and eventually embodied in the Paris climate agreement. In 2011, Schellnhuber was a guest speaker at the *Four Degrees or More? Australia in a Hot World* conference in Melbourne. His answer to the rhetorical question “What is the difference between a 2-degree and a 4-degree world?” was as brutal as it was succinct: “Human civilisation.”

We’re a funny lot, really, us climate-change scientists. Like the rest of the scientific profession, we get up each



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morning and go to our offices and laboratories and field sites. We collect and analyse our data and write papers for learned journals. But here's where we go off the rails: we're the only members of the scientific profession who also hope every day that we're wrong.

Hope we're wrong about the rate of sea-level rise accelerating so fast that the homes of perhaps a billion people could be inundated by the end of the century. Hope we're wrong about the demise of our most precious natural icon, the once magnificent Great Barrier Reef. Hope we're wrong that the rate of glacier melt in the Andes and the Tibetan Plateau threatens the freshwater supplies of more than one sixth of the world's population. Hope we're wrong that displacement of people across the globe by increasing weather-related disasters could eventually make the current refugee crisis look like small beer. Hope, hope, hope ...

The early 20th-century Italian Marxist Antonio Gramsci put it most elegantly when he wrote of the tension between the "pessimism of the intellect and the optimism of the will". He wasn't, of course, referring to climate change, but he might as well have been.

The daily feed of climate change-related stories in my inbox embodies this tension. It is replete with examples of new solar farms, exciting technological advances in battery storage, the growth of fossil-fuel divestment by companies and even governments. But scattered among these feel-good stories are moments of sheer heart-stopping, lie-awake-at-night terror: accelerating ice loss in the Antarctic, weakening of the Gulf stream, temperatures in the Arctic spiking to 25 degrees Celsius above normal last February. (Yes, 25! Not a typo.)

Scientists are supposed to be objective, calmly weighing evidence like the blindfolded Lady Justice, rather than flawed and frightened human beings on an emotional rollercoaster oscillating daily between hope and despair.

The emotional health of climate-change scientists has itself attracted research attention. A study by Lesley Head and Theresa Harada, published in the journal *Emotion, Space and Society* last year, drew on interviews with 13 Australian scientists to describe the "emotional labour" of studying climate change. Quoting the scientists under pseudonyms, the study explored the frustration and anxiety felt by some climate scientists who at the very least know they are held to a far greater standard of infallibility than other scientists, and in more extreme circumstances have faced hate mail and even death threats. Coping mechanisms ranged from gallows humour to avoiding mentioning one's work in social situations to reading trashy novels to turn off.

The climate-scientist psyche has even been explored via art. In 2014, ANU graduate student Joe Duggan began asking climate-change scientists to send him a short, handwritten letter on how they feel about climate change.

The resulting exhibition of the letters, *Is This How You Feel?*, revealed dismay, anxiety, frustration, fear, depression, fury, discouragement and sadness, but also hope, optimism and determination not to quit.

Sometimes I'd like to quit. Once upon a time I was a biologist. I miss it. But after following ants around the bush for four years in the late '80s to get a PhD in behavioural ecology I was ready for a change. "Climate change might be a thing," my PhD supervisor said (or words to that effect). It seemed a good idea at the time, and a lot more likely to equip me for an actual job that paid cash money than following more ants. In the 20-plus years since, I have discovered that climate-change science is the Hotel California of research – you can check out any time you like, but the moral challenge (to quote a former prime minister) that comes with it means that leaving is simply not an option.

On my darker days, I look at the research going on all around me, and I wonder. What is the point, for example, of sequencing the genome of this creature or that, if said creature might have such a limited time on this planet that all this knowledge will be for naught? At the same time, I envy those colleagues for whom the worst problem in their academic life is to miss out on a grant, or get a paper rejected. How simple that life seems.

It's not all gloom, of course. Paris in December 2015 was a glorious, hopeful moment. When the then French foreign minister, Laurent Fabius, brought down the gavel on the climate agreement in that room in Le Bourget, there were hugs and kisses and tears of relief. And the tsunami of global investment in renewable energy since then continues apace, now outstripping that for fossil fuels by an increasing margin. But even these bright lights are not enough. The United Nations' latest emissions gap report finds that only a third of the emissions reduction needed to stay below the 2 degrees Celsius target is likely to be met on present trajectories.

Meanwhile, back at home, the shambles that is Australian climate policy limps on, with some backbenchers as fossilised as their favourite fuel. Defying global trends, the government wound back the Renewable Energy Target, and we remain the only developed country to repeal a carbon price. Australian emissions continue to rise, and in 2015 the independent Climate Action Tracker organisation judged us as the nation with the largest relative gap between our emission trajectory and our Paris promises.

At a personal level, the marvellous Desmond Tutu provides some solace. His exhortation to "Do your little bit of good where you are; it's those little bits of good put together that overwhelm the world" is written on a Post-it above my computer. So each day I get up, go to my office to write my papers and make my slides, try to do my little bit of good, and hope.

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