

# 10 Climate change – a psychological challenge

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Climate change is a hard problem. To really accept that the climate is being affected by human practices and that it is our collective responsibility to take action, we have to get our head around a series of mental obstacles put in place by our evolutionary history and cultural practices. What are these and what can we do about them?

One of the first psychological obstacles is that climate change is difficult to directly observe, especially in New Zealand. This means that people must instead have faith in the scientists who take measures from ice cores and tree rings and put them into computer models, producing graphs that we are told add up to big trouble. But faith, as we know, is no easy task. This is especially true when someone else, who also professes to be an expert, comes along and tells us these graphs show a cyclical blip that adds up to nothing much. How do we know who to trust?

Research by Dan Kahan and his associates at Yale Law School, has suggested that we tend to trust people and sources most like ourselves.<sup>1</sup> This is a process they call “cultural cognition”. When information on a scientific issue is presented in such a way that it echoes our pre-existing worldview, we endorse it. When it counters this we are much less likely to do so. It is notable that climate change has been associated with a collective, egalitarian worldview accompanied by taxation, regulation and international agreements. These are red flags to those who believe in small government and personal freedom, often labelled the “neoliberal” worldview. To top it off, one of the first figures to bring climate change to popular attention was Al Gore, a leader of the Democrat Party in the USA. A study of 1,000 US participants in the ten years from 2001 – 2010, found that, across all the years combined, 65% of Democrat voters agreed that “the effects of global warming have already begun to happen” with only 42% of Republican voters doing so.<sup>2</sup> What is even more interesting is that in the first year of the study, the margin between the two types of voters was relatively small, with 60% of Democrats and 49% of Republicans endorsing this statement. Nine years later, the gap was huge, with 70% Democrats and 29% of Republicans doing so. It is most unlikely the two types of voters experienced different weather events, so the explanation is probably to do with cultural cognition. In the US public mind, climate change and the Democrat party are inextricably entwined.

There was another intriguing finding in the study above. Republicans who indicated they had a good understanding of climate change were less likely to agree that the effects had already begun, than those who indicated a poor understanding. While there may be a number of explanations for this, it further suggests that exposure to information on what should be an objective matter, is not processed this way by real people. This is backed by other studies out of Yale Law School which have demonstrated that if people are presented with balanced information about a scientific issue they do not tend to moderate their opinions, but instead become more entrenched in their original stance. This is because we are adept at attending to information that fits our concept of how the world works, and ignoring or rejecting information that does not do so. It is easy to test this on yourself. If you heard a “climate denier” interviewed on talk back radio, would this make you more or less inclined to take climate change seriously? I assume, if you are reading this, the answer is *more* inclined to take it seriously, as you would probably find yourself infuriated with the information being presented and so argue back in your own mind.



The process of resisting and finding counter-arguments to information presented by sources we do not trust, acts to strengthen our position in the face of opposition. You would probably do this even if the climate denier claimed to have new research information (yeah right, I suspect you would think). So you can see how hard it becomes for whole populations to be in agreement on an issue like climate change once it is associated with a worldview that is not endorsed by all.

Notably, however, people do change their minds. If information on an issue is presented in a reasonable, consistent style, and by people who are considered experts by society as a whole, even those who are initially resistant may be won over.<sup>3</sup> We saw this with smoking. Over time, the evidence that smoking was harmful became too consistent to sustain serious resistance. This suggests it may be helpful for scientists to maintain the calm, factual tone they are trained in. The latest report on Climate Change by the Royal Society of New Zealand is a good example of this tone.<sup>4</sup> A moderate tone acts as a solid base for eventual acceptance of the scientific consensus. Indeed a survey conducted in 2014 suggests that 63% of New Zealanders are concerned about the effects of climate change on society, which is a relatively large percentage for an issue that is only intermittently featured in mainstream media.<sup>5</sup>

The importance of expert information presented in a reasonable style is not to under-value the role of more passionate activists in forwarding action on climate change. However, emotional and dramatic appeals offered by activists will work best for those who are already converted or genuinely open-minded. If this latter group were organised into a broad civic movement, then this could be extremely influential in giving politicians the courage to introduce carbon taxes, fast track public transport schemes and protect and enhance our natural ecosystems.

Another tricky characteristic of climate change is that its impact is global. It has long been established that the more people who could take action to rectify a problem, the less likely it is any particular individual will do so. A series of experiments in the 1960s and 70s showed this phenomenon, labelled the “bystander effect” with groups of between three and six individuals.<sup>6</sup> With climate change there are potentially seven billion others out there who could do something. Can you get away with leaving it up to others? Absolutely. That way you’ll avoid looking like an idiot for caring too much and, even worse, doing more than your share. Unfortunately this kind of thinking, which comes rather easily to most of us, turns into a vicious cycle, as we all ignore the problem for now, waiting for others to get started before we make a move. You may recall the New Zealand Institute’s 2008 report on climate change that suggested we be a “fast follower”.<sup>7</sup> This reflects the underlying logic of bystanders who collectively allow a disaster to unfold, due to the unwillingness of any to step forward first.

Despite popular rhetoric that human-beings are consumed by self-interest, people do care about others. There is abundant evidence for altruism, that is acts that benefit someone else while costing the altruistic individual. We are most likely to put ourselves out for our children, other close kin and people that are clearly similar to ourselves.<sup>8</sup> This leads to a second way in which climate change’s global nature is problematic. We are designed to care, but not for everyone. In fact, we have probably evolved to readily distinguish between “our” people and “other” people. Those who are part of our group, be it our family, our school, our workplace, our country, are included in our map of ourselves. They are a critical part of our identity, signifying where we fit in the social world. This group-like thinking is part of the reason why in certain historical circumstances ordinary people have needed little persuasion to fight in wars, keep slaves and ignore large-scale human misery. In each case the people

we kill, own or allow to suffer and die are not included in those groups that make-up the social aspect of our identity. They are others, and the needs of others are expendable when it comes to our own survival and yearning for social status, comfort and novelty.

Climate change is about everyone. That is a pretty tough call for the human brain. Could we take people's group-like thinking and persuade individuals to identify with something as large as humanity? One passage that makes me feel part of a glorious all-in-it-together, human community, is from an essay by Tony Kushner.<sup>9</sup> At the beginning of the essay the writer is told by a taxi-driver that there is a supernova sixty light-years away, destined to wipe out the earth. The essay then goes on to describe the more likely ways in which we will be "got", including global warming, the collapse of our economic system, or a catastrophic war, and urges people to play a part in solving these problems. At the end of the essay, he puts the following challenge:

*"So when the supernova comes to get us we don't want to be disappointed in ourselves. We should hope to be able to say proudly to the supernova, that angel of death, "Hello supernova, we have been expecting you, we know all about you, because in our schools we teach science not creationism, and so we have been expecting you, everywhere everyone has been expecting you, except Texas. And we would like to say, supernova, in the moment before we are returned by your protean fire to our previous inchoate state, clouds of incandescent atomic vapour, we'd like to declare that we have tried our best and worked hard to make a good and just and free and peaceful world, a world that is better for our having been here, at least we believe it is."*

Al Gore's movie, *An Inconvenient Truth* used many images that draw attention to the planet everyone shares, sometimes portraying greenhouse gasses, rather like the supernova in Kushner's essay, as a common enemy. This is different from the usual rhetoric that climate change is our fault. Even if it is our fault, talking about climate change as something external that we can and should join together to overcome can be very empowering. Guilty burdens weigh us down, collective challenges inspire action.

Not only is climate change global, but it is also long-term. Early studies on pigeons and children showed that both are willing to reduce the size of the reward they will receive in order to get it now.<sup>10</sup> Having somewhat better self-control, adults are a little more patient, but our patience has limits. Doing actions now for the sake of future generations is a challenge indeed. This is not as selfish as it seems. The longer the time frame the higher the risk that our well-intended actions will fail to achieve the intended target, and people sense this. Most of us would like to leave the world a better place than we found it; it is just so hard to know if what we do now will meaningfully contribute to this end. Like jumpy Wall St investors, uncertainty puts us off.

I have left the most daunting mental obstacle for last. This is the one that almost certainly gets you right now, even if you are thoroughly convinced that the climate change is a serious threat, feel it is your responsibility to do something about it, and care deeply about present and future people all over the planet. It's that huge social conspiracy we all create and yet few of us consciously want – the conspiracy to keep things running just as they are.

Much of this is to do with the power of social modelling. Extensive research has shown that people copy other people.<sup>11</sup> The most compelling social model is visible behaviour. When we see people act in a certain way, this prompts us to do the

same. This may have something to do with mirror neurons, brain cells that are activated, both when we see a particular behaviour (or become aware of it through other channels such as hearing), and when we perform that behaviour. While controversial, mirror neurons suggest that seeing and doing are part of overlapping brain circuitry and may help explain our desire to copy. We also copy behavioural traces, signals that people leave behind indicating the behaviour that is normal in particular settings. If you take a walk around Auckland or Wellington, what do you see? People driving cars (although less so in Wellington!), using abundant electricity and creating waste destined for landfill. To act differently in the face of this is very difficult for individuals. Collectively, however, we can offer alternative visions for vibrant living with much less fossil fuel use and much more respect for the living systems in which we are embedded. These can have a similar psychological effect as the picture presented by the world around us, that is they can provide models for how to act. Many New Zealand groups are currently providing such inspiring visions, such as EnviroSchools, Auckland's congestion free network, the Inspiring Stories Trust, Generation Zero, and several city and district councils including Kapiti Coast.

To conclude, climate change is a hard psychological problem, but there are ways we could overcome the collective inertia and take serious action. Its association with a particular worldview suggests that scientists should continue to present evidence of its effects. This will make it increasingly untenable to argue that it is either not a problem or not of our making. Alongside this "rational" approach, activists are also needed to rally mass civic movements, with such movements having led to major institutional reforms in the past.<sup>12</sup> Finally, we need positive visions for the future. Fortunately, sensible climate change mitigation is consistent with many social and ecological benefits, such as increased plant life in our cities, building local communities so people can walk and cycle to activities they value, improved building standards and less waste. We need to draw far more attention to these benefits. Climate change may be scary, but climate change mitigation will do us a world of good. This is the message we need going forward.

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<sup>1</sup> <http://www.culturalcognition.net/>

<sup>2</sup> McCright, A. & Dunlap, R. (2011). The politicization of climate change and polarization in the American public's views of global warming, 2001-201. *The Sociological Quarterly*, 52, 155 – 194.

<sup>3</sup> Wood, W., S. Lundgren, et al. (1994). "Minority influence: A meta-analytical review of social influence processes" *Psychological Bulletin* 115(3): 323-345.

<sup>4</sup> <http://www.royalsociety.org.nz/expert-advice/papers/yr2016/climate-change-implications-for-new-zealand/>

<sup>5</sup> [https://www.sbc.org.nz/\\_data/assets/pdf\\_file/0003/105762/New-Zealanders-Climate-Change-Actions-and-Attitudes.pdf](https://www.sbc.org.nz/_data/assets/pdf_file/0003/105762/New-Zealanders-Climate-Change-Actions-and-Attitudes.pdf)

<sup>6</sup> Latané, B. & Darley, J. M. (1976). Help in a crisis: Bystander response to an emergency. In J.W. Thibaut & J.T. Spence (Eds.), *Contemporary topics in social psychology* (pp. 309-332). Morristown, NJ: General Learning Press.

<sup>7</sup> [http://nzinitiative.org.nz/site/nzbr/files/A\\_climate\\_change\\_strategy\\_for\\_NZ.pdf](http://nzinitiative.org.nz/site/nzbr/files/A_climate_change_strategy_for_NZ.pdf)

<sup>8</sup> See Piliavin, J.A. & Charng, H.-W. (1990). Altruism: A review of recent theory and research. *Annual Review of Sociology*, 16, 27-65.

<sup>9</sup> See Loeb, P. (2004). *The impossible will take a little while*. New York: Basic Books.

<sup>10</sup> Rachlin, H. & Green, L. (1972). Commitment, choice and self-control. *Journal of the Experimental Analysis of Behaviour*, 17, 15-22.

<sup>11</sup> See Harré, N. (2011) Psychology for a Better World; available from <http://www.psych.auckland.ac.nz/psychologyforabetterworld>

<sup>12</sup> Chenoweth, E. & M. J. Stephan (2011). *Why Civil Resistance Works: The Strategic Logic of Nonviolent Conflict*. New York, Columbia University Press.

NOTE: Some of the material in this paper is based on Niki Harré's chapter of the same title, in *Carbon Neutral by 2020: How New Zealanders Can Tackle Climate Change* (2007) edited by N. Harre & Q. Atkinson, Craig Potton Publishing.

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