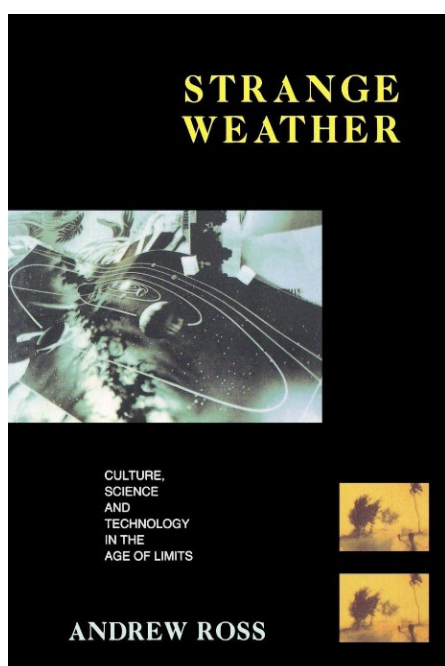


My 1991 'Climate Book of the Year'

Ross, A. (1991) *Strange Weather: Culture, Science and Technology in the Age of Limits*. London/New York: Verso. 275pp.

This essay continues my series of monthly posts in which I select one 'climate' book to highlight and review from one of the 44 years of my professional career in climate research (starting with 1984, my first year of academic employment). The series will end in September 2027, the month in which I shall retire. [See here for more information](#) about the rationale for this series, and the criteria I have used in selecting my highlighted books.

This '1991 essay' can be [download as a pdf](#).



In 1990, the Intergovernmental Panel on Climate Change (IPCC), on behalf of WMO and UNEP, published its First Assessment Report on Climate Change. The greatest media attention was paid to the contribution of Working Group 1, whose contribution was simply titled, '[Climate Change: The IPCC Scientific Assessment](#)', declaring itself to be offering "the most authoritative and strongly supported statement on climate change that has ever been made by the international scientific community". The overall assessment had been commissioned by the world's governments, through the United Nations, with the purpose of informing political and economic debates and international climate policy negotiations that were to be expected in the years ahead. What the IPCC Report lacked, however, was an appreciation of the cultural context and technological trends which had catalysed

concerns about human-caused global warming. The Report lacked any recognition, and therefore any evaluation, of the ways in which different socio-cultural groups might perceive or respond to the issues raised. It was the epitome of a 'science-first' style of knowledge assessment.

This was perhaps not surprising. At the time, climate change was predominantly understood by public audiences at large, and by politicians specifically, as an issue which needed careful evaluation of *scientific* evidence of its causes and consequences. Climate change as a deeper cultural phenomenon did not register. It was the evidence assessed by the IPCC that would provide the "firm scientific foundation" upon which appropriate governmental response strategies and policies would be constructed. Most of the popular academic books

on climate change which appeared around the turn of the decade had titles such as ‘The Greenhouse Challenge’, ‘The Greenhouse Trap: What We’re Doing to the Atmosphere and How We Can Slow Global Warming’ and ‘Hothouse Earth: The Greenhouse Effect and Gaia’.¹ Books such as these were written to inform readers about the science of ‘the greenhouse effect’ and about the technical and economic possibilities and challenges of reducing human impact on the global climate.

Very few social scientists—and even fewer scholars from the humanities disciplines—had yet begun to engage with the profound questions raised by anthropogenic climate change. With perhaps the exception of environmental journalist Bill McKibbin’s ‘The End of Nature’, appearing in 1989 and [which I have previously reviewed in this series](#), there were by 1991 no books that provided a strong *cultural* critique—in contrast to the IPCC’s strong *scientific* assessment—of the causes and consequences of climate change. It is for this reason that I have selected as my **Climate Book of 1991, ‘Strange Weather: Culture, Science and Technology in the Age of Limits’**. Authored by the Scottish cultural studies academic [Andrew Ross](#), this was one of the first attempts at such a critique.

The target of ‘Strange Weather’ was considerably greater than just climate change. Ross was offering a broad cultural analysis of the relationship between science, technology and (post)modernity, using issues such as computer hacking, cyberpunk, science fiction and, significantly, global warming, to focus his analysis. The longest of his six chapters was devoted to considering the relationship between climate change, weather, technology, and culture. ‘Strange Weather’ was significant for two reasons. First, Ross broke new ground by identifying global warming as another manifestation of technology which needed to be understood using the tools of cultural theory. And, second, he was seeking the meaning of global warming amidst the geo-political earthquakes of the tumultuous years between 1989 and 1991.

Ross was 35 years old when ‘Strange Weather’ was published, a teacher of English and Cultural Studies at Princeton University following his earlier academic training in the UK at the universities of Aberdeen (BA, 1978) and Kent (PhD, 1984). He later (1993) was to become Director of the Graduate Program in American Studies at New York University. From 1986 to 2000, Ross served on the editorial collective of Duke University Press’s cultural theory journal [Social Text](#), which saw itself as offering a platform for progressive and activist Left academics. A few years before ‘Strange Weather’, Ross had edited a book length collection of *Social Text* essays titled, ‘Universal Abandon? The Politics of Postmodernism’² and a few years later the journal became famous—and Ross himself—for its role in the [Sokal](#)

¹ Falk, J. and Brownlow, K. (1989) *The Greenhouse Challenge*. New York: Viking/Penguin; Lyman, F. et al. (1990) *The Greenhouse Trap: What We’re Doing to the Atmosphere and How We Can Slow Global Warming*. Boston MA: Beacon Press; Gribbin, J.R. (1990) *Hothouse Earth: The Greenhouse Effect and Gaia*. London: Bantam Press.

² University of Minnesota Press, 1989.

[affair](#). This was a central episode in the academic culture wars of the mid-1990s, as modernist science encountered post-modernist social science in hand-to-hand combat.³

In 'Strange Weather', Ross offers a very different analysis of global warming to that offered just two years earlier by Bill McKibbin in 'The End of Nature'. McKibbin wrote as an environmental journalist immersed in the tradition of Thoreau, Emerson and Muir; his is a philosophical, at times romantic, reflection on how climate change had changed the world, certainly how it had changed his own *inner* world. Ross, however, writes from a very different position—as an academic cultural theorist—from within what he calls 'the American Left' tradition of ex-Marxist libertarianism.

Ross describes 'Strange Weather' as being "about the cultural politics of technology" (p.5), but yet with each of the technological issues he confronts he finds he cannot escape ecological questions. He gives great weight to human-caused climate change—aka global warming—in his analysis because it introduces the idea of ecological limits: "the ecology movement's cardinal lessons about limitations are especially important to examine and consider" (p.5). This is significant because ecological limits challenge the Left's more conventional concerns about the "technologies of social control" and about "limits" being those that are imposed on the masses by regulatory or repressive regimes. Writing after the demise of the Soviet Union, Ross also has to contend with the collapse of communism rather than of capitalism (pp.171-72), as had been predicted by Marx. We therefore see Ross, both in Chapter 5—'Getting the Future We Deserve'—and in Chapter 6—'The Drought This Time'—searching for a cultural reading of global warming which conforms to his ideological commitment, rather than to any ecological imperative.

Ross is well-read about the general state of climate science at the end of the 1980s, but 'Strange Weather' is not a science-first account of the greenhouse effect. Indeed, he recognises, but is sceptical of, the way the ecological movement leans so heavily on science: "the ecology movement [i]s virtually unique in relying upon appeals to science for proof of the justice of its claims" (pp.184-185). In this regard he is an early forerunner of later criticisms of the scientisation of much climate advocacy—and indeed of the science-first framing of the IPCC itself—as it developed through the 1990s and into the twentieth century.⁴ Ross was also making this point at the same time that development scholars in India were first pointing out that scientising climate change in the way that western

³ In 1996, *Social Text* published a paper by the physicist Alan Sokal professing to show connections between physics and post-modern theory, but which was later revealed by Sokal to be a hoax meant to expose the low academic standards of 'post-modernism'. *Social Text* was awarded the 1996 Ig Nobel Prize for Literature for being taken in by the hoax. For a summary of this important controversy, see: Hilgartner, S. (1997) The Sokal Affair in context. *Science, Technology, & Human Values*. 22(4): 506–522.

⁴ See for example: Wynne, B. (2010) Strange weather, again: climate science as political art. *Theory, Culture & Society*. 27(2/3): 289-305. The sociologist Brian Wynne acknowledged that he borrowed the title of his article from Ross's 1991 book. Wynne developed and extended Ross's argument that "the founding certitudes of modern science have been demolished" (Ross, p.11). Also see: Garrard, G. (2020) Never too soon, always too late: Reflections on climate temporality. *WIREs Climate Change* 11(1), e605; and Hulme, M. (2021) *Climate Change: Key Ideas in Geography*. Abingdon: Routledge. 288pp.

scientists and politicians were doing marginalised the important ethics and politics of greenhouse gas emissions.⁵

There are other ways in which Ross foreshadows later critiques of the conventional framing of climate change. He is attuned to the reality that many people will not necessarily be impressed by science's universalist claims about an objective change in the climate: "Here, we come across the vast spectrum of cultural differences in living with and interpreting the physical world that have little to do with the 'universal' claims of global climate modelling" (p.214).⁶ And even in the heady climate years of 1989 to 1991, Ross recognises that "in spite of the media picture for a world 'united' behind the Western war campaign in the Gulf [the 1991 invasion of Iraq], there is no doubt that globalist sentiment and awareness is still thin on the ground among the majority of the population" (pp.248-49). The assured 1990s faith in the benign and ascendant ideology of globalism and internationalism, the wave upon which the institutions of climate change management were founded, [has been shattered in recent years](#)⁷ and from his 1991 vantage point Ross could already see the limitations of world cosmopolitanism.

Ross's position as a radical Left academic helps explain the publisher of his book, Verso Books. Verso—formerly New Left Books—is a left-wing publishing house based in London and New York and is perhaps the largest independence radical publisher in the English-speaking world. But 'Strange Weather' was a very early venture by Verso into the politics of climate change: their lists hardly ever featured climate topics until after 2015 and the signing of the Paris Agreement.⁸ Yet the book gained a considerable readership over the following years, especially—but not only—within the fields of cultural studies and environmental sociology. According to Google Scholar it has been cited nearly 1,000 times in the past 30 years, and in the 2020s 'Strange Weather' is still attracting between 10 and 15 citations each year.

Although appearing around the same time as the IPCC's First Assessment, the book would have been almost invisible—as well as probably not being understandable—to climate scientists, ecologists and economists, the three academic disciplines that exerted greatest influence over the knowledge framing of climate change during the 1990s and beyond.⁹ In my own reading of climate change I only encountered Ross's work in 2006 and this was

⁵ The argument for differentiating between emissions of greenhouse gases on the basis of their ethical valency—'luxury emissions versus survival emissions'—was first made in: Agarwal,A. and Narain,S. (1991) *Global Warming in an Unequal World*. Delhi: Centre for Science and the Environment. 36pp.

⁶ Ross's argument should be read against anthropologist Peter Rudiak-Gould's later work, for example: Rudiak-Gould,P. (2013) 'We have seen it with our own eyes': why we disagree about climate change visibility. *Weather, Climate & Society*. 5(2): 120-132.

⁷ See for example: Appelbaum,A. (2024) *Autocracy Inc.: The Dictators Who Want to Run the World*. London: Allen Lane.

⁸ In recent years, Verso has gained a much higher profile publishing radical analysis of the politics of climate change by authors such as Andreas Malm, Wim Carton, Holly Buck and Tad Delay.

⁹ 'Strange Weather' attracted a few, not always entirely complimentary, academic reviews in social studies journals. For example, see: Polan,D. (1993) *SubStance*. 22(2/3): 366-370; Fitting,P. (1993) *Utopian Studies*. 4(1): 184-187; Williams,R. (1993) *Technology and Culture*. 34(2): 459-461.

through his article, not his book. In the same year ‘Strange Weather’ was published, Ross recycled Chapter 6, ‘The Drought This Time’—verbatim, although under the new title ‘[Is Global Culture Warming up?](#)¹⁰—as a journal article in the sociology journal *Social Text*.

Why did ‘Strange Weather’ gain such a large readership and why—despite its peculiarities and limitations—have I chosen it as my **Climate Book of 1991**? Ross was perhaps the first author to give an substantial airing to several of the critiques about the limitations of the science-first framing of climate change which would emerge later from social scientists and humanities scholars. Although not sceptical about the scientific evidence for global warming, Ross *was* sceptical of the globalist narrative that quickly sedimented around climate change and he was willing to criticise the political and corporate elites’ appropriation of this narrative. At this early stage in the writing of climate change, Ross was able to recognise, and approve, the cultural power of local and vernacular knowledge about changes in the weather; he also recognised the potency of nationalism as a site of resistance against globalism and climate cosmopolitanism.

In short, Andrew Ross’s ‘Strange Weather’ was already identifying some of the main dimensions of what later would be called the ‘cultural turn’ in climate studies, 15 or 20 years before the mainstream academy was ready to embrace such a move.¹¹ And more than a decade would pass before any other books were published that offered sustained cultural engagement with the idea of human-caused climate change (I am suggesting here, ‘Weather, Culture, Climate’ in 2003, and ‘A Change in the Weather: Climate and Culture in Australia’ in 2005.¹²) Albeit in a rather eclectic, and somewhat disorderly, manner, ‘Strange Weather’ offered a very early critique of some of the dimensions of the climate change story that were later to become central features of the engagement by social scientists and humanities scholars with climate change: the importance of framing, the dangers of globalism, the limits of science, technofuture imaginaries, epistemic imperialism by ‘the global north’, the emergence of futures markets as a management tool.

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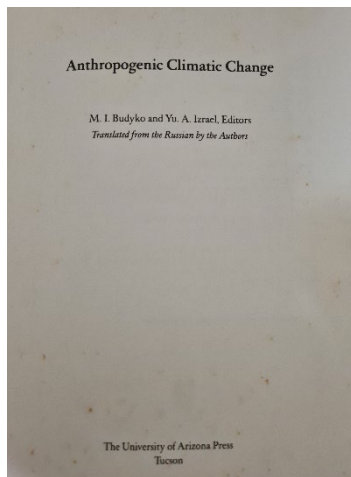
Other significant climate books published in 1991

Budyko, M.I. and Izrael, Yu.A. (1987/1991) *Anthropogenic Climate Change*. [trans. from Russian] Tucson, AZ: University of Arizona Press. 485pp.

¹⁰ Ross, A. (1991) Is Global Culture Warming up? *Social Text*. 28: 3-30.

¹¹ See: Hulme, M. (2011) Meet the humanities. *Nature Climate Change*. 1(4): 177-179; and Castree, N. et al. (2014) Changing the intellectual climate. *Nature Climate Change*. 4(9): 763-768.

¹² Strauss, S. and Orlove, B. (eds) (2003) *Weather, Climate, Culture*. Oxford/New York: Berg/Oxford International. 307pp.; Sherratt, T., Griffiths, T. and Robin, L. (eds.) (2005) *A Change in the Weather: Climate and Culture in Australia*. Canberra: National Museum of Australia Press. 216pp.



Throughout the 1980s, there had been sustained communication, interaction and data exchange between American and Soviet climate scientists. This had been facilitated through ‘the US-USSR Bilateral on Environmental Protection’, administered by the US Environmental Protection Agency, with the additional involvement of the NSF, NOAA and the US Department of Energy. Part of this exchange involved the translation into English of climate studies originally published in Russian and one of these was ‘**Anthropogenic Climate Change**’ (Leningrad, 1987), written by the influential climate scientists Mikhail Budyko and Yuri Izrael. Budyko and

Izrael had both made major contributions to the recently published First Assessment Report of the IPCC (1990), through Budyko’s promotion of the use of climate palaeo-analogues to foresee future climate conditions of global warming, and through Izrael’s chairing of the IPCC Working Group on climate impacts. This 1991 translation of their work brought to the attention of the English-reading world a wider Russian perspective on global warming and in particular about climate warming’s potential impacts on agriculture. While in no way sceptical that humans—and CO₂ emissions specifically—were warming the climate, Budyko and Izrael were not convinced that this prospect demanded aggressive measures to limit greenhouse gas emissions. As EPA climate lead Alan Hecht writes in the Foreword, “all readers will benefit from the exposure of Soviet thinking on climate change and the extensive Soviet literature referenced in the text”.