

# DATA SOLILOQUIES



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Martin John Callanan

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## ONE HUNDRED AND TWENTY-FIVE BILLION METAPHORS PER SECOND

This publication grew out of an intermittent collaboration that began during our terms as writer and artist in residence at the UCL Environment Institute for the 2008-09 academic year. Throughout that time we maintained an ongoing conversation that centred on a mutual interest in the use and abuse of scientific data, particularly in its visual manifestations. A wide array of graphs, charts, computer models, diagrams and other forms of visual advocacy have become inescapable fixtures of public science presentations — particularly in the field of climate science — though they are often treated as if they were neutral ‘found objects’ rather than elaborate narrative constructions containing high degrees of statistical uncertainty. These fascinating, and occasionally beautiful, artefacts soon became our shared subject, and much of the work that we produced during our residencies, such as (RH’s) ‘The whistleblower and the canary: rhetorical constructions of climate change’, and (MJC’s) *Text Trends* animations, dealt explicitly with the theatricality of data display and the spectacularization of scientific information. ‘What is so special about the language of quantity?’, as the statistical historian Theodore Porter asked at the outset of his seminal study *Trust in Numbers* (1995), and much of our collaborative work was undertaken in response to this and other questions concerning the extraordinary cultural fluidity of scientific data.

In May 2006 the television naturalist Sir David Attenborough — the most trusted voice in British broadcasting — announced that he was no longer a sceptic when it came to the causes of climate change: 'My message is that the world is warming, and that it's our fault', he informed a startled looking Huw Edwards on the BBC's *Ten O'Clock News*. But it hadn't been images of glacial retreat that had served to convince him of humanity's guilt, nor had it been footage of Arctic icecaps crashing into an ever-rising sea. His conversion had been brought about by a small coloured graph produced by researchers at the Hadley Centre, the climate change wing of the Met Office. The graph featured three jagged lines, one red, one green and one yellow, representing, respectively, average recorded temperatures, natural climatic variability, and atmospheric concentrations of carbon dioxide, each plotted over a 150-year period (from 1850 to 2000). Up until the middle of the twentieth century, the three lines rose and fell together, but after that point, while the green line rose only very slightly, the red and yellow lines shot up in tandem, J-curving dramatically from the 1970s onwards. As Attenborough pointed out, 'the coincidence of the curves made it perfectly clear that we have left the period of natural climatic oscillation behind', and that our climate is now, effectively, man-made (fig. 1).

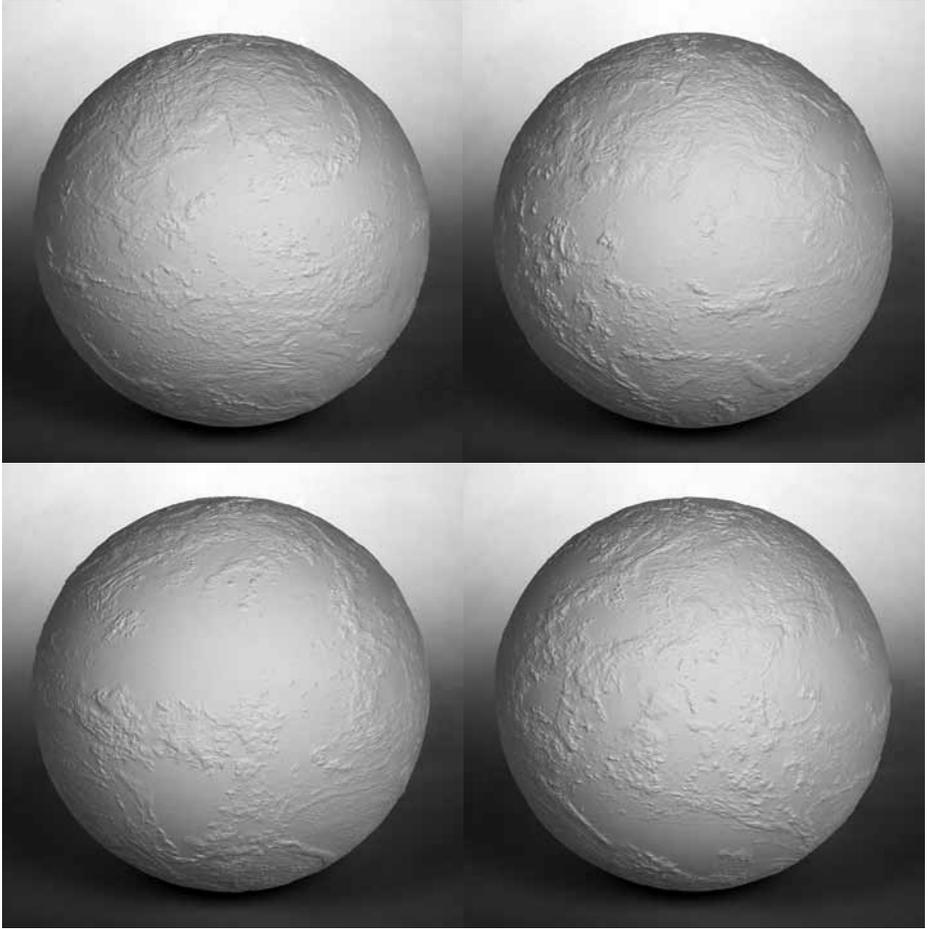
Such graphical representations have come to assume a key role in climate change debates, often presented in the manner of exhibits at a trial, and credited with the irrefutability of

Climate change is the first major environmental crisis in which the experts appear more alarmed than the public. Most other environmental risk stories, from pesticides and ‘global cooling’ in the mid-twentieth century, to mobile phone masts and GM technology in the early twenty-first, have seen expert voices recruited to defuse the public’s growing arsenal of technological fears. But when it comes to climate change, the response so far has been muted unease in the face of the escalating warnings of the scientists. As the ecologist Bill McKibben has observed, it may be that climate scientists have simply succeeded in adding ‘another line to the long list of human problems — people think about ‘global warming’ in the same way they think about ‘violence on television’ or ‘growing trade deficits’, as a marginal concern to them, if a concern at all.’<sup>16</sup> In spite of their inescapable presence in the news schedules, climate change narratives must still compete in the overcrowded attention economy.

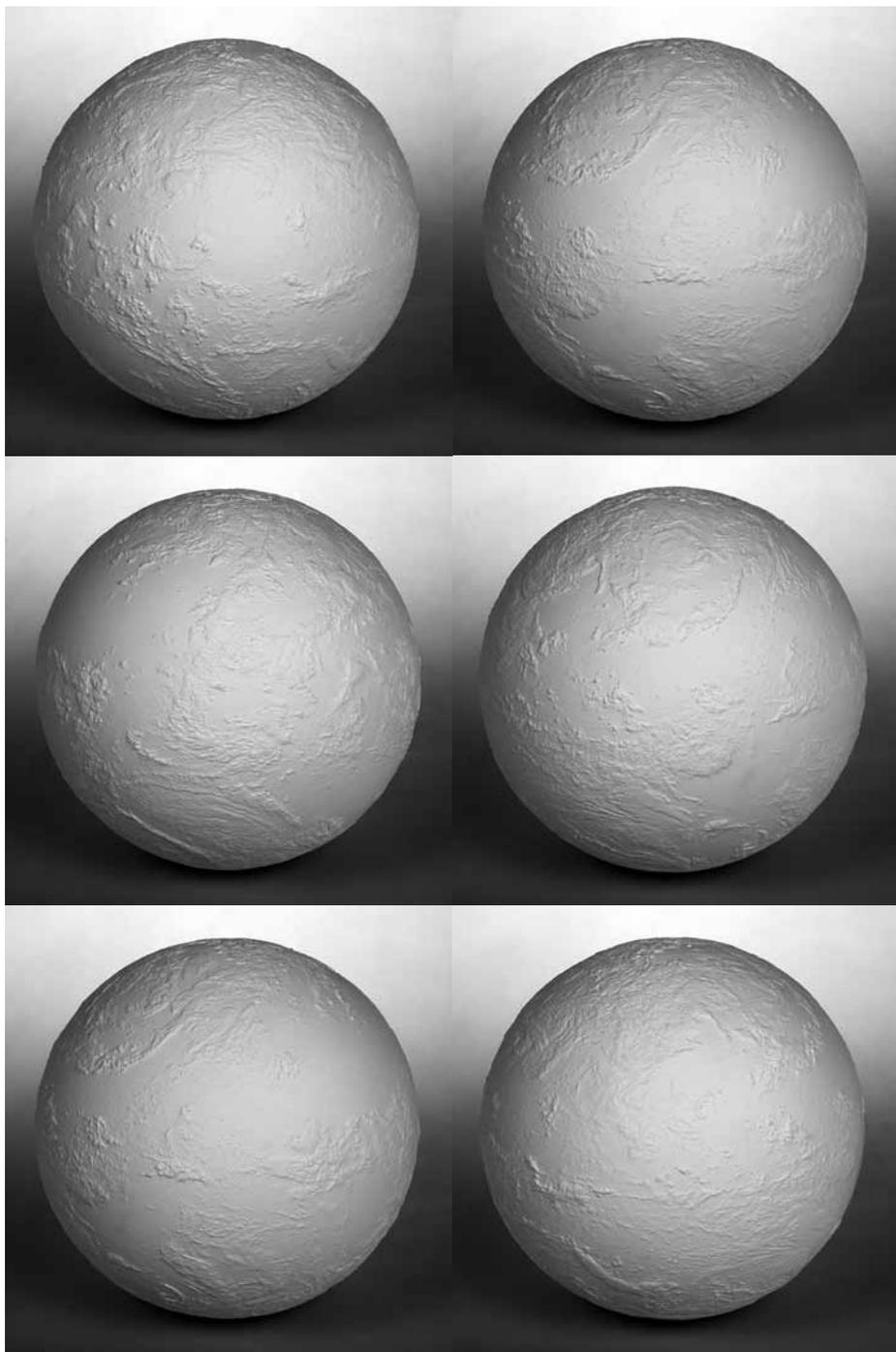
<sup>16</sup> Bill McKibben, ‘Worried? Us?’, *Granta* 83 (2003), 8.

## NARRATIVES OF CLIMATE CHANGE

As was suggested in the previous chapter, one of the principal barriers to communicating climate change is its underlying invisibility, which has served to demote the growing crisis into a mere abstraction, in spite of the profusion of visual ‘evidence’ to which our attention is constantly being drawn: melting



Figs. 15-24 and 25, 26 on the following four pages  
*A Planetary Order (Terrestrial Cloud Globe)*, Martin John Callanan



THIS QUADRANGLE OF UNIVERSITY COLLEGE LONDON  
WHICH THE FIRST STONE WAS LAID ON 30 APRIL 1827  
BY HRH THE DUKE OF SUSSEX  
AS DECLARED TO BE COMPLETE ON 13 NOVEMBER 1965  
BY HM QUEEN ELIZABETH II

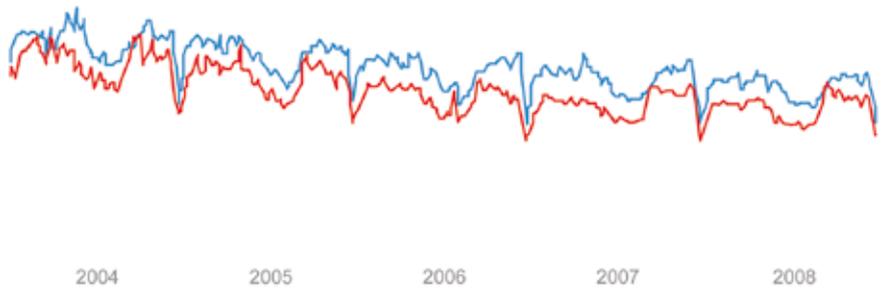




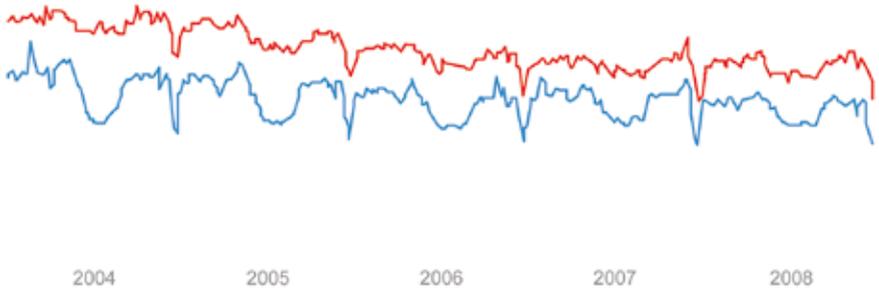
Over the past twenty years, global climate change has emerged as the overarching narrative of our age, uniting a series of ongoing concerns about human relations with nature, the responsibilities of first world nations to those of the developing world, and the obligations of present to future generations. But if the climate change story entered the public realm as a data-driven scientific concept, it was quickly transformed into something that the ecologist William Cronon has called a ‘secular prophecy’, a grand narrative freighted with powerful, even transcendent languages and values. And though climate science can sometimes adopt the rhetoric of extreme quantification, it also — as has been seen throughout this book — relies on the qualitative values of words, images and metaphors. This can even happen simultaneously: during the discussions that led up to the IPCC’s Third Assessment Report of 2001, for example, a room full of scientists discussed for an entire week whether or not to include the three-word phrase ‘discernable human influence.’ Only three words, perhaps, but three extremely potent words (both qualitatively and quantitatively speaking), that between them tell a vast and potentially world-altering story.

Martin John Callanan’s ongoing *Text Tends* series offers a deadpan encounter with exactly this kind of quantification of language. Using Google data the series explores the vast mine of information that is generated by the search engine’s users, each animation taking the content generated by search queries and reducing the process to its essential elements:

consensus uncertainty



climate risk



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**Richard Hamblyn** is an environmental writer and historian; his books include *Terra: Tales of the Earth*, a study of natural disasters; *The Invention of Clouds*, which won the 2002 Los Angeles Times Book Prize; *The Cloud Book* and *Extraordinary Clouds* (both in association with the Met Office). He is currently editing *The Picador Book of Science*, and researching a book about man-made landscapes.

**Martin John Callanan** is an artist whose work spans numerous media and engages both emerging and commonplace technology. His work includes translating active communication data into music; freezing in time the earth's water system; writing thousands of letters; capturing newspapers from around the world as they are published; taming wind onto the Internet and broadcasting his precise physical location live for over two years. Martin is currently Teaching Fellow in Fine Art Media at the Slade School of Fine Art in London.

<http://greyisgood.eu>

**The UCL Environment Institute** was established in November 2003 as a focus for interdisciplinary environmental research across UCL, as well as to improve links between those who carry out environmental research, and those with need of its findings, notably policy makers and other public and private sector interests.

<http://www.ucl.ac.uk/environment-institute>

DATA SOLILOQUIES is a book about the extraordinary cultural fluidity of scientific data. A wide array of graphs, charts, computer models and other forms of visual advocacy have become inescapable fixtures of public science presentations, though they are often treated as if they were neutral 'found objects' rather than elaborate narrative constructions containing high levels of statistical uncertainty. Through a mix of essays and artworks, this witty and engaging book – the result of a collaboration between Richard Hamblyn and Martin John Callanan during their terms as writer and artist in residence at the UCL Environment Institute – examines the theatricality of scientific data display, while critiquing some of the poorly designed statistical wallpaper that surrounds so much public science debate.

With a foreword by Professor Mark Maslin, Director of the UCL Environment Institute.

