A call to throw caution to the wind

The Hockey Stick and the Climate Wars
Dispatches from the Front Lines

Michael E. Mann

Reviewed by Naomi Oreskes

In 1992 President George H. W. Bush signed the United Nations Framework Convention on Climate Change, committing the US—one of 166 signatories—to preventing dangerous anthropogenic interference in the climate system. Since then, there has been a steady effort to cast doubt on the science that underlies that commitment and the integrity of the scientists who produced it. Those efforts have been well documented by many, including by me, as well as in a recent book by James Powell, The Inquisition of Climate Science (Columbia University Press, 2011), which succinctly summarizes the entire disheartening story.

The latest contribution is Michael Mann’s The Hockey Stick and the Climate Wars: Dispatches from the Front Lines, which recounts how he and coworkers Raymond Bradley and Malcolm Hughes became targets of attacks that ranged from hate mail to subpoenas from the US Congress and the attorney general of Virginia. Why? Because their work demonstrated that the observed warming of the past 50 years is outside the envelope of the natural variability of the previous millennium, thus denying climate contrarians one of their most effective talking points.

The Hockey Stick and the Climate Wars conveys how unprepared Mann was to confront the world of hardball politics. His story is sobering, worrisome, and at times deeply moving. Any scientist who has been tempted to criticize Mann or his colleagues for being sloppy in their language, their email management—sadly mislabeled by the media as Climategate—or responses to requests for information would do well to read this book. Mann deserves our respect and admiration for what he has been through and for his willingness to discuss it. The narrative is a deeply honest scientific coming-of-age story: In his conclusion, Mann notes the dramatic change in his own thinking, from previously believing in a firewall between science and politics to being convinced that scientists must be willing to engage the political context in which they work.

A telling anecdote involves the publication of the 1998 Nature paper by Mann, Bradley, and Hughes that first presented the hockey stick graph documenting the temperature record of the Northern Hemisphere in the past 1000 years. Mann says he was “caught completely off-guard” by the media attention the graph received, which raises a crucial question: How is it that the academic community encourages young scientists to issue press releases, yet leaves them unprepared to interact with the press and defend their work?

Defend is the appropriate word, especially in light of the 1995 Intergovernmental Panel on Climate Change report, which said that the human impact on climate was “discernible.” Lawrence Livermore National Laboratory scientist Benjamin Santer, the lead author of the chapter making that claim, was subjected to blistering attacks in the Wall Street Journal and elsewhere. So it is not surprising that the hockey stick, which provided independent corroboration of that conclusion, would be attacked too.

Mann’s response to the media frenzy was to place the scientific uncertainties in the foreground, so as to ensure that he would not overstate his case. He recounts not “taking the bait” when posed the question, Did the hockey stick prove that humans were responsible for global warming? “I repeated that our results were ‘highly suggestive’ of that conclusion, but I wouldn’t go further than that. I knew well that establishing that recent warming is anomalous in a long-term context alone did not establish that human factors were responsible for it.”

Quite so. The hockey stick alone did not prove anything. But together with the evidence already compiled by Santer and others, it did demonstrate that there was anomalous warming taking place. Placed in an even larger context, it demonstrated that humans were responsible. As is now well known, Svante Arrhenius had long ago predicted that global warming would result from human combustion of fossil fuels. His calculations of climate sensitivity may not have been accurate, but his basic insight was correct, as has been repeatedly reaffirmed—initially somewhat loosely by early researchers, and later more rigorously by climate modelers. Placed in that context, the hockey stick was a theoretical prediction that had come true. But by not presenting the historical and scientific context, Mann missed an opportunity to make a strong but defensible causal claim.

In a private communication with me, Mann acknowledged that he “didn’t know the history and controversy over all of this,” and until recently, few scientists did. But the point is not the controversy; it is the lack of controversy. If the contrarians did not think Santer’s and Mann’s evidence provided proof, or something close to it, then why did they go to such lengths to discredit it? The hockey stick was as close to proof as we get in science. Society needed to hear climate scientists say, “Humans are causing global warming.” Instead, Mann and others offered the lexicon of suggestion and indication. By hewing to that lexicon, they gave the public the impression that the science was still unclear.

It’s quite understandable why Mann chose the language he did. Scientists are cautious to preserve the respect of colleagues who bristle at overstatements and grandstanding. But if scientific community norms are in conflict with the needs of society, then perhaps it may be time to reexamine those norms. Moreover, if the point of caution is to avoid being attacked, then The Hockey Stick and the Climate Wars makes it clear that tactic does not work.

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