

Scientific Misconduct *The Manipulation of Evidence for Political* *Advocacy in Health Care and Climate Policy*

by George Avery

No. 117

February 8, 2010

Executive Summary

Science is increasingly being manipulated by those who try to use it to justify political choices based on their ethical preferences and who are willing to suppress evidence of conflict between those preferences and the underlying reality. This problem is clearly seen in two policy domains, health care and climate policy.

In the area of climate policy, recent revelations of e-mails from the government-sponsored Climate Research Unit at the University of East Anglia reveal a pattern of data suppression, manipulation of results, and efforts to intimidate journal editors to suppress contradictory studies that indicate that scientific misconduct has been used intentionally to manipulate a social consensus to support the researchers' advocacy of addressing a problem that may or may not exist.

In health care policy, critics have long worried about the inordinate influence of pharma-

ceutical and medical device manufacturers on research to show the safety and viability of new products. Recent information, however, shows that government agencies may cause more problems in this area—a worrisome development considering that health care legislation recently passed by the United States Senate would allow federal agencies to punish organizations whose researchers publish results that conflict with what the agency feels is appropriate.

That bill allows the withholding of funding to an institution where a researcher publishes findings not “within the bounds of and entirely consistent with the evidence,” a vague authorization that creates a tremendous tool that can be used to ensure self-censorship and conformity with bureaucratic preferences. As AcademyHealth notes, “Such language to restrict scientific freedom is unprecedented and likely unconstitutional.”

George Avery, PhD, MPA, is an assistant professor of public health in the Department of Health and Kinesiology and the Regenstrief Center for Health Care Engineering at Purdue University.

Recent information shows that government agencies may do more to manipulate research than private sponsors.

Introduction

A. J. Ayer argues that the scientific approach to knowledge is valuable to the extent that “one does not merely insist that factual inferences from one level to another are legitimate but seriously tries to meet arguments that show that they are not.”¹ The development of knowledge, from the approach of science, involves repeated tests of principles we believe might be true, careful review of the results and the data used to generate them, and evaluation of the weight of evidence supporting and opposing these ideas. The knowledge used for rational economic and scientific decisionmaking, as Friedrich Hayek noted, “never exists in concentrated or integrated form but solely as dispersed bits of incomplete and frequently contradictory knowledge.”² Aggregation and evaluation of this knowledge is the critical function of science.

Scientific knowledge is a valuable but incomplete tool for the development of public policy. Its strengths and weaknesses both lie in the fact that the scientific process is based on only one value, which is the integrity of the process of generating knowledge. Science can answer whether a relationship exists between two factors that can be manipulated to create a different result, but it cannot answer the questions of whether we ought to manipulate the relationship. The question of “ought” is not a matter of epistemology, but rather a decision of ethics and moral values, questions better settled by political debate that elucidates and develops a consensus of society on whether a course of action is in society’s best interest. Science can inform that process by providing an objective evaluation of the underlying reality, but it cannot replace consideration of moral values. Likewise, moral and ethical decisions made without reference to the underlying objective reality are severely handicapped.

Increasingly, however, science is being manipulated by those who try to use it to justify political choices based on their ethical preferences, and who are willing to act to suppress

evidence of conflict between those preferences and the underlying reality. By undermining the processes of science through the selective inclusion or exclusion of data and arguments, advocates seek to frame a reality consistent with their personal ethical and moral framework that serves to persuade the polity that their preferred course of action is correct. This problem is not unique to government. Law professor Holly Doremus notes that scientists can move from “skeptical evaluation” into advocacy due to “employment by an entity with a financial stake” in a particular outcome and “other sorts of strong policy preferences.”³ This blurs the differences between scientific and policy debates, limits the role of science in policymaking, and, in the words of climate scientist Roger Pielke, turns scientists into “leading members of advocacy campaigns.”⁴

This problem is clearly seen in two policy domains, health care and climate policy. In the area of health care, critics have long worried about the inordinate influence of pharmaceutical and medical device manufacturers on research to show the safety and viability of new products. Recent information, however, shows that government agencies may cause more problems in this area—a worrisome development considering that legislation recently passed by the United States Senate would allow federal agencies to punish organizations whose researchers publish results that conflict with what the agency feels is appropriate. In climate policy, recent revelations of e-mails from the government-sponsored Climate Research Unit at the University of East Anglia reveal a pattern of data suppression, manipulation of results, and efforts to intimidate journal editors to suppress contradictory studies that indicate that scientific misconduct has been used intentionally to manipulate a social consensus to support the researchers’ advocacy of addressing a problem that may or may not exist.

Health Care

The influence of interested parties on health care research has been an issue of con-

cern for at least two decades, focusing largely on the issue of whether sponsorship of pharmaceutical research and drug trials by manufacturers has led to manipulation of data and suppression of adverse results in order to support approval of new products. Sponsorship by manufacturers has been found to be associated with a reduced likelihood of the reporting of adverse results.⁵ Likewise, a significant link has been found between industry funding and the likelihood that results of a randomized trial will support a new therapy.⁶ These biases may taint the results of meta-analyses used to guide clinical practice.⁷ Likewise, the American Cancer Society has been accused of organizing a campaign of misleading attacks on the integrity of researchers who published a study, originally supported by the society, which presented results contradicting the society's stance on the health impact of environmental tobacco smoke.⁸

One proposed solution to this problem is to increase public funding for the conduct of research on therapeutic effectiveness.⁹ Ironically, that may well aggravate the problem. In July 2007, AcademyHealth, a professional association of health services and health policy researchers, published results of a study of sponsor restrictions on the publication of research results. Surprisingly, the results revealed that more than three times as many researchers had experienced problems with government funders related to prior review, editing, approval, and dissemination of research results. In addition, a higher percentage of respondents had turned down government sponsorship opportunities due to restrictions than had done the same with industrial funding. Much of the problem was linked to an "increasing government custom and culture of controlling the flow of even non-classified information."¹⁰

Of particular concern is a provision of the Senate-passed Patient Protection and Affordable Care Act,¹¹ which needs only to be approved by the House of Representatives before it receives President Obama's signature. In a section creating a new Patient-Centered Outcomes Research Institute to conduct comparative-effectiveness research, the bill allows the

withholding of funding to any institution where a researcher publishes findings not "within the bounds of and entirely consistent with the evidence,"¹² a vague authorization that creates a tremendous tool that can be used to ensure self-censorship and conformity with bureaucratic preferences. This appears to be an effort in part to bypass the court order in *Stanford v. Sullivan*, a case involving federal contractual requirements that would have banned researchers from any discussion of their work without pre-approval by the Department of Health and Human Services. The order held that such blanket bans are "overly broad" and constitute "illegal prior restraint" on speech.¹³ The language in the Senate bill attempts to overcome this hurdle by eliminating prior restraint, but using the threat of *post hoc* punishment as an incentive for self-censorship. As AcademyHealth notes, "Such language to restrict scientific freedom is unprecedented and likely unconstitutional."¹⁴ Given the higher propensity of government agencies to try to control the dissemination of scientific information, this is an alarming threat to the scientific process and to the utility of scientific research to inform good policymaking.

Climate Policy

Another example of manipulation of scientific processes to support preordained policy preferences is in the area of climate policy, where scientists who support radical political interventions to prevent climate change have engaged in a systematic attempt to alter contradictory data and intimidate journal editors into rejecting papers presenting contradictory evidence.

On November 20, 2009, the climate science website Realclimate.org received a large file containing e-mail downloaded by hackers from the Climate Research Unit at the University of East Anglia, which has been at the center of research on climate change and quite influential with the United Nations Intergovernmental Panel on Climate Change. Those communications involved prominent climate

According to AcademyHealth, the Senate health care bill's "language to restrict scientific freedom is unprecedented and likely unconstitutional."

Government agencies have censored evidence to support rulemaking activities and shape public support for specific climate policies.

scientists such as Michael Mann of Pennsylvania State University and Phil Jones of the University of East Anglia.

The public release of these documents created an immediate controversy, revealing data manipulation to cover inconvenient findings; efforts to intimidate editors into not publishing contradictory results that refuted their arguments; and a general contempt for opponents, including efforts to discredit them as cranks rather than address their arguments and evidence. Efforts to remove the editors of the journals *Climate Research* and *Geophysical Research Letters* for accepting research papers that raised questions about the magnitude of human-induced global warming are documented, as well as efforts to boycott *Weather* and other Royal Meteorological Society journals for requiring appropriate data and calculations to be submitted with all articles. The communications document resistance to the release and sharing of research data, including violations of British and American “freedom of information” requirements and the deletion of research data rather than making it available for other scientists to analyze.

The reasons behind this misconduct are clear. The tactics of those who wish to impose political change to address environmental issues consist largely of convincing the population and political leaders that the existence and threat of manmade global warming is a settled issue, based on a consensus of scientific information.¹⁵ The messiness of contradictory information belies that consensus. Hence the leaders of the movement have attempted to suppress such information.

Although highlighted by the Climate Research Unit e-mails, the problem is not limited to authors of those e-mails. The phenomenon has also been observed in how public agencies censor evidence to support rulemaking activities and shape public support for specific climate policies. For example, in a March 12, 2009, memorandum regarding the U.S. Environmental Protection Agency’s *Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act*, the director of the

EPA’s National Center for Environmental Economics forbade the author of an internal critique of the science behind the proposed findings to release his report outside the center, and on March 17 wrote to the author that this critique would not be included or discussed, because

the time for such discussion of fundamental issues has passed for this round. The administrator and the administration has decided to move forward on endangerment, and your comments do not help the legal or policy case for this decision. . . . I can only see one impact of your comments given where we are in the process, and that would be a very negative impact on our office.¹⁶

Conclusion

These cases highlight the temptations towards manipulation of scientific data to build support for favored political and economic outcomes. The purpose of systematic testing and evaluation of ideas, which we describe as “science,” is to allow us to differentiate between what Hayek refers to as “facts” and “appearances.”¹⁷ Properly used, it gives us an objective means to identify the causes of problems and the potential impact of proposed policy interventions, which must also be evaluated in the context of moral and ethical values. When we abandon the values and practices of science, or pervert them to support a predetermined agenda, we elevate “appearances” and subordinate “facts.” Abandoning the objectivity of science to suppress evidence that does not favor the preferences of the censor undercuts the ability of the polity to make rational decisions. Such censorship is inconsistent with democratic ideals in that it denies venues for legitimate exchange of ideas through open debate.

While private misconduct is threatening enough, the growing practice of governmental censorship of scientific data may be even more frightening. Private censorship can be

limited if a diversity of outlets exist for communications. Private organizations lack the coercive power of government, and no private organization—even large and wealthy corporations in the energy or pharmaceutical industries—possesses the power and resources of government.

Furthermore, a fundamental duty of a democratic regime is to ensure the conditions for open exchange of information and informed participation of citizens in governance. Violation of the letter and spirit of that duty undercuts the social contract that is the foundation for the legitimacy of the democratic state. Democracy depends not on the preferences of elites, but rather on a functional marketplace for ideas and vigorous debate between contending viewpoints.

Notes

1. A. J. Ayer, *The Problem of Knowledge* (New York: Penguin Books, 1965), p. 83.
2. F. A. Hayek, “The Use of Knowledge in Society,” *American Economic Review* 35, no. 4 (1945): 519.
3. Holly Doremus, “Scientific and Political Integrity in Environmental Policy-Making,” *Texas Law Review* 86 (2007): 1601–53.
4. Roger Pielke, “When Scientists Politicize Science: Making Sense of Controversy over *The Skeptical Environmentalist*,” *Environmental Science and Technology* 7 (2004): 405.
5. Mark Friedberg et al., “Evaluation of Conflict of Interest in Economic Analyses of New Drugs Used in Oncology,” *Journal of the American Medical Association* 282, no. 15 (1999): 1453–57.
6. Richard A. Davidson, “Source of Funding and Outcome of Clinical Trials,” *Journal of General Internal Medicine* 1, no. 3 (1986): 1525; and Joel Lexchin et al., “Pharmaceutical Industry Sponsorship and Research Outcome and Quality: Systematic Review,” *British Medical Journal* 326 (2003): 1167.
7. Joel A. Lexchin, “Implications of Pharmaceutical Industry Funding on Clinical Research,” *Annals of Pharmacotherapy* 39 (2005): 194–97.
8. James E. Enstrom, “Defending Legitimate Epidemiologic Research: Combating Lysenko Pseudoscience,” *Epidemiologic Perspectives and Innovations* 4 (2007): 11.
9. Lexchin, “Implications of Pharmaceutical Industry Funding on Clinical Research.”
10. AcademyHealth, *Historical Analysis of Ownership and Publication Rights in Government Contracts for Health Services Research* (Washington: AcademyHealth, February 2007).
11. The Patient Protection and Affordable Care Act (Senate bill), an amendment in the nature of a substitute to H.R. 3590, 111th Cong., 1st sess., introduced November 19, 2009, <http://democrats.senate.gov/reform/patient-protection-affordable-care-act.pdf>.
12. *Ibid.*, p. 1657–58.
13. *Board of Trustees of Leland Stanford Junior University v. Sullivan*, 773 F. Supp. 472 (D.D.C. 1991).
14. Coalition for Health Services Research, “Publication Restrictions in Health Reform,” Washington, AcademyHealth, November 30, 2009.
15. See Patrick J. Michaels, *Sound and Fury: The Science and Politics of Global Warming* (Washington: The Cato Institute, 1992), p. 138; and James Taranto, “Settled Science? Computer Hackers Reveal Corruption Behind Global-Warming ‘Consensus.’” *Wall Street Journal*, November 23, 2009.
16. Al McGartland, e-mail message to Alan Carlin, John Davidson, and Steve Newbold, “Re: endangerment comments?” March 17, 2009. Quoted in Sam Kazman, re: *Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act*, Docket ID No. EPA-HQ-OAR-2009-0171, Washington, Competitive Enterprise Institute, June 23, 2009.
17. F. A. Hayek, *The Counterrevolution of Science: Studies on the Abuse of Reason* (New York: The Free Press, 1952).

RELEVANT STUDIES IN THE POLICY ANALYSIS SERIES

657. **The Massachusetts Health Plan: Much Pain, Little Gain** by Aaron Yelowitz and Michael F. Cannon (January 19, 2010)
656. **Obama's Prescription for Low-Wage Workers: High Implicit Taxes, Higher Premiums** by Michael F. Cannon (January 13, 2010)
654. **Bending the Productivity Curve: Why America Leads the World in Medical Innovation** by Glen Whitman and Raymond Raad (November 18, 2009)
650. **Yes, Mr. President: A Free Market Can Fix Health Care** by Michael F. Cannon (October 21, 2009)
643. **Halfway to Where? Answering the Key Questions of Health Care Reform** by Michael D. Tanner (September 9, 2009)
642. **Fannie Med? Why a "Public Option" Is Hazardous to Your Health** by Michael F. Cannon (July 27, 2009)
638. **Obamacare to Come: Seven Bad Ideas for Health Care Reform** by Michael D. Tanner (May 21, 2009)
633. **Health-Status Insurance: How Markets Can Provide Health Security** by John H. Cochrane (February 18, 2009)
632. **A Better Way to Generate and Use Comparative-Effectiveness Research** by Michael F. Cannon (February 6, 2009)
621. **Medical Licensing: An Obstacle to Affordable, Quality Care** by Shirley Svorny (September 17, 2008)
614. **Organ Sales and Moral Travails: Lessons from the Living Kidney Vendor Program in Iran** by Benjamin E. Hippen (March 20, 2008)
613. **The Grass Is Not Always Greener: A Look at National Health Care Systems Around the World** by Michael D. Tanner (March 18, 2008)
604. **A Gift of Life Deserves Compensation: How to Increase Living Kidney Donation with Realistic Incentives** by Arthur Matas (November 7, 2007)
601. **The Freedom to Spend Your Own Money on Medical Care: A Common Casualty of Universal Coverage** by Kent Masterson Brown (October 15, 2007)
597. **Medicaid's Soaring Cost: Time to Step on the Brakes** by Jagadeesh Gokhale (July 19, 2007)

595. **The Massachusetts Health Plan: The Good, the Bad, and the Ugly** by David A. Hyman (June 28, 2007)
569. **Health Savings Accounts: Do the Critics Have a Point?** by Michael F. Cannon (May 30, 2006)
568. **A Seismic Shift: How Canada’s Supreme Court Sparked a Patients’ Rights Revolution** by Jacques Chaoulli (May 8, 2006)
565. **Individual Mandates for Health Insurance: Slippery Slope to National Health Care** by Michael D. Tanner (April 5, 2006)

OTHER STUDIES IN THE BRIEFING PAPER SERIES

116. **The Citizens’ Guide to Transportation Reauthorization** by Randal O’Toole (December 10, 2009)
115. **ObamaCare: A Bad Deal for Young Adults** by Aaron Yelowitz (November 9, 2009)
114. **All the President’s Mandates: Compulsory Health Insurance Is a Government Takeover** by Michael F. Cannon (September 23, 2009)
113. **High-Speed Rail Is Not “Interstate 2.0”** by Randal O’Toole (September 9, 2009)
112. **Massachusetts Miracle or Massachusetts Miserable: What the Failure of the “Massachusetts Model” Tells Us about Health Care Reform** by Michael Tanner (June 9, 2009)
111. **Does the Doctor Need a Boss?** by Arnold Kling and Michael F. Cannon (January 13, 2009)
110. **How Did We Get into This Financial Mess?** by Lawrence H. White (November 18, 2008)
109. **Greenspan’s Monetary Policy in Retrospect: Discretion or Rules?** by David R. Henderson and Jeffrey Rogers Hummel (November 3, 2008)
108. **Does Barack Obama Support Socialized Medicine?** by Michael F. Cannon (October 7, 2008)
107. **Rails Won’t Save America** by Randal O’Toole (October 7, 2008)
106. **Freddie Mac and Fannie Mae: An Exit Strategy for the Taxpayer** by Arnold Kling (September 8, 2008)

105. **FASB: Making Financial Statements Mysterious** by T. J. Rodgers (August 19, 2008)
104. **A Fork in the Road: Obama, McCain, and Health Care** by Michael Tanner (July 29, 2008)
103. **Asset Bubbles and Their Consequences** by Gerald P. O'Driscoll Jr. (May 20, 2008)
102. **The Klein Doctrine: The Rise of Disaster Polemics** by Johan Norberg (May 14, 2008)
101. **WHO's Fooling Who? The World Health Organization's Problematic Ranking of Health Care Systems** by Glen Whitman (February 28, 2008)
100. **Is the Gold Standard Still the Gold Standard among Monetary Systems?** by Lawrence H. White (February 8, 2008)
99. **Sinking SCHIP: A First Step toward Stopping the Growth of Government Health Programs** by Michael F. Cannon (September 13, 2007)
98. **Doublespeak and the War on Terrorism** by Timothy Lynch (September 6, 2006)
97. **No Miracle in Massachusetts: Why Governor Romney's Health Care Reform Won't Work** by Michael Tanner (June 6, 2006)
96. **Free Speech and the 527 Prohibition** by Stephen M. Hoer sting (April 3, 2006)
95. **Dispelling the Myths: The Truth about TABOR and Referendum C** by Michael J. New and Stephen Slivinski (October 24, 2005)
94. **The Security Pretext: An Examination of the Growth of Federal Police Agencies** by Melanie Scarborough (June 29, 2005)
93. **Keep the Cap: Why a Tax Increase Will Not Save Social Security** by Michael Tanner (June 8, 2005)
92. **A Better Deal at Half the Cost: SSA Scoring of the Cato Social Security Reform Plan** by Michael Tanner (April 26, 2005)
91. **Medicare Prescription Drugs: Medical Necessity Meets Fiscal Insanity** by Joseph Antos and Jagadeesh Gokhale (February 9, 2005)

Published by the Cato Institute, Cato Institute Briefing Papers is a regular series evaluating government policies and offering proposals for reform. Nothing in Cato Institute Briefing Papers should be construed as necessarily reflecting the views of the Cato Institute or as an attempt to aid or hinder the passage of any bill before Congress.



Contact the Cato Institute for reprint permission. Additional copies of Cato Institute Briefing Papers are \$2.00 each (\$1.00 in bulk). To order, or for a complete listing of available studies, write the Cato Institute, 1000 Massachusetts Avenue, N.W., Washington, D.C. 20001. (202) 842-0200 FAX (202) 842-3490.