LIPPINCOTT WILLIAMS & WILKINS

EPIDEMIOLOGY

 Volume 16(3), May 2005, pp 406-409

Science Policy and Politics: Will the Recent Past Preface the Future?

[Epidemiology & Society]

Robbins, Anthony

Editor's Note: *Epidemiology & Society addresses broad ranging of topics of interest to researchers, public-health workers, and other readers. We invite short submissions offering reports on global health issues, insights about epidemiology, policy commentaries, or other pieces of general interest.*

Correspondence: Anthony Robbins, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111. E-mail: anthony.robbins@tufts.edu.

Figure. No caption available.

Science is never far from government policymaking. Throughout history, scientists have been rewarded or punished depending on whether their scientific views supported the policies preferred by the people in power. When science and the enlightenment that science fosters do not support politically favored policies, science suffers. During the last 4 years, we in the United States have observed a notable clash between science and an administration that believes it can make policy without open scientific debate. Now there are warnings from the White House of retribution against the science community that has challenged this administration.

Will the next 4 years be different? Will the Bush administration change its politicized approach to science or will it continue to attack, suppress, and misrepresent science to the public? Will distortion of science for policymaking be limited to domestic decisions, or will it impinge on programs beyond our borders—in other countries and in international organizations?

The Bush administration has united the scientific community in protest over the way this administration has demeaned the integrity of science and scientists. Scientists' opposition to this administration is, in my memory, unprecedented. Scientists, new to bringing their scientific concerns into the public debate, have proceeded with caution and carefully reasoned analyses. Emanating from every scientific quarter, opposition to the administration's policies departs radically from the usually mild discontent with government science policy that is not uncommon in our country. Perhaps scientists perceive the very integrity of science to be in jeopardy. Surely, it is not surprising that epidemiologists are speaking out early. Epidemiologic research (which, among other things, assesses the human health consequences of exposures) has often experienced nasty political pressure.

From the start, the administration opened a broad campaign against science-based public health and environmental regulation. This administration has reversed science-based policy decisions on global warming,[1] arsenic in drinking water,[2] ergonomics in the workplace,[3] and diesel exhaust particulates in underground mines.[4] The administration substituted policies that offended many advocates (and probably pleased others). More important, the process itself alarmed scientists because of its disregard for science. A more systematic attack on science policymaking has followed.

STACKING REVIEW PANELS

Under the Federal Advisory Committee Act, the U.S. Government establishes committees to advise executive agencies on programs and policy, particularly policies that rely on science. The law requires these advisory bodies to “be fairly balanced in terms of the points of view represented and...not be inappropriately influenced by the appointing authority or by any special interest.”[5] Under President Bush, the Secretary of Health and Human Services simply disbanded the National Human Research Protections Advisory Committee and the Advisory Committee on Genetic Testing, both of which were attempting to craft solutions to the complex problems accompanying genetic testing and research.[6] Apparently, their proposed solutions might have conflicted with the religious values of the President and many of his political constituencies.

Perhaps to ensure that the Department of Health and Human Services would get no unwanted advice from its environmental health advisory committees, the same Secretary filled the committees with scientists long associated with polluting industries. Fifteen of 18 members of the Advisory Committee on Childhood Lead Poisoning Prevention that reports to the Director of the National Center for Environmental Health were replaced, many with scientists who had held leadership positions in organizations opposed to public health and environmental regulation. The newly appointed industry-supported scientists imperiled a committee review of whether the Centers for Disease Control and Prevention's definition of “elevated blood lead levels” in children was sufficiently protective.

Even for the normally nonpolitical National Institutes of Health (NIH), political appointees screened and rejected scientific appointments, apparently for political reasons. I was told by the former Fogarty International Center Director, Gerald Keusch, that early in the Bush administration, the Office of the Secretary rejected 19 of 26 of scientists (including a Nobel Prize winner) who had been nominated for the Center's advisory committee and approved by the NIH Director.

During my service in 2 administrations (those of Presidents Carter and Clinton), we complied with both the spirit and letter of the Advisory Committees Act. Indeed, we found it very useful to hear diverse views. When I was Director of the National Institute for Occupational Safety and Health, we sought a range of experience and views for our panels. At the National Vaccine Program Office, our advisory committee was similarly representative, including scientists from universities, consumer groups, and industry. Scientific committees were more than window dressing or rubber stamps.

Obviously, times have changed. Questioned by reporters, the spokesperson for the Secretary of Health and Human Services asserted the Secretary's prerogative to rely on experts who share the

President's philosophical sensibilities. Others defending the President's strategy argued that “this kind of thing always happened.”[7] However, no one in the scientific community was fooled. In fact, we were alarmed.

I joined a group of colleagues, most of whom had served in Federal Government science posts or on advisory committees, to write an editorial for *Science* magazine, titled “Advice Without Dissent.”[8] We told the Secretary he had it wrong. “Scientific advisory committees do not exist to tell the secretary what he wants to hear but to help the Secretary, and the nation, address complex issues.” “Instead of grappling with scientific ambiguity and shaping public policy using the best available evidence (the fundamental principle underlying public health and environmental regulation), we can now expect these committees to emphasize the uncertainties of health and environmental risks, supporting the Administration's antiregulatory views. And in those areas where there are deeply held conflicts in values, we can expect only silence.”

SLANTING PEER REVIEW

The Office of Information and Regulatory Affairs in the White House Office of Management and Budget proposed new guidance on peer review for all executive agencies who prepare and review “significant regulatory–science documents.”[9] This proposal appeared as a proposed *OMB Bulletin* dated 29 August 2003—not a literature that scientists frequently peruse. To support its proposal, the administration offered no evidence that “reform” was needed or that peer review was somehow broken.

The *Bulletin* simply introduced the radical idea, camouflaged in benign language, that reviewers should be “independent of the agency” for whom the review was being conducted. Not wrong on its face, but what did “independent” mean?

Under the proposed rule, an appointee to an advisory committee would have lacked independence if he or she were “currently receiving or seeking substantial funding from the agency.”[10] In other words, OMB's definition would have disqualified many of the same scientists who had been judged by the agency as the best able to conduct the nation's publicly funded research.

What would the consequences have been? The United States has 2 principal sources of funding for science: government and industry. (A much smaller contribution comes from charitable foundations.) Exclusion of the university-based scientists funded by government grants would have tipped the balance of peer review panels precipitously toward scientists employed by industry.

Many science leaders, including the President of the National Academy of Sciences Institute of Medicine, at first endorsed the stated intentions of the OMB proposal when it was released.[11] However, when they reviewed the specifics of the proposal and the implications of the new rules became clear, the science community (including the National Academy and many government scientists) weighed in against the worst aspects of OMB's proposal. Opponents prevailed and OMB reissued a proposed *Bulletin* with many of the offending parts removed.[12] In mid-December 2004, OMB issued the final *Bulletin* on peer review.[13] Although no longer pernicious, the procedures are still capable of increasing the complexity and slowing the pace of public health and environmental policy- and rule-making.

THE BROADER BATTLE

Reports of suppressing, manipulating, or misrepresenting science in a host of federal agencies and in peer review, as well as administration mischief on advisory committees, stimulated unprecedented resistance. More than 5000 scientists, including 48 Nobel laureates, 62 National Medal of Science recipients, and 127 members of the National Academy of Sciences, signed a statement developed by the Union of Concerned Scientists calling for an end to administration efforts "to suppress and distort scientific knowledge and undermine scientific advisory panels."[14] *Science*, the *New York Times*, and others tracked the controversies. Scientific societies and members of Congress—Waxman, McCain, and Lieberman—spoke out.

Did the science community seize the moment to become the eloquent and constructive opposition that was needed? Consider the rather limited response of the National Academy of Sciences.

The National Academy of Sciences created a panel to consider recommendations regarding scientific appointments.[15] Unfortunately, the narrow charge from the Academy to its panel may have missed the bigger issue—the future of government science agencies. The prime objective of the science community must be outstanding government science agencies. Today more than ever, we need excellent leaders in government service committed to building and maintaining the scientific and technical capacity of the agencies and the country, not shrinking it or weakening them. Bill Jordan and others led a progressive global research agenda for new vaccines at the National Institute of Allergy and Infectious Diseases in the early 1980s. Similarly, a strong Food and Drug Administration (until recently) set the world standard for protecting the public from ineffective and dangerous drugs.

SCIENCE AT RISK?

First-rate science leaders are attracted to excellent scientific agencies serving the public interest. This paradigm requires adequate resources and a guarantee of independence on scientific issues. Intrusion of political considerations into scientific matters can turn a superb agency into a poor one, and demoralize and weaken excellent researchers and their leaders.

What is lacking in this administration is a commitment to government science. Even worse, we have heard from the President's Science Advisor the first warnings of retribution against the science community.[16] Perhaps he was picking up on the veiled threat from Robert Walker, a former Republican Chairman of the House Science Committee and spokesperson for the Bush election campaign, who said that for its actions, the science community could be confronted with a "push-back at some point in the future."[16]

If the second-term actions and policies of President Bush continue to bring us second-rate leadership for government science agencies, what will follow? Surely, second-rate science, diminished funding, and declining integrity. We may enter a dark age for civilian science in the United States, because without great science within government and funded by government, it is hard to imagine that great science will thrive in our country.

Consider too the consequences for the world of a declining U.S. scientific enterprise. Can a

President of the most powerful country on earth suppress scientific enlightenment here in the United States—still the world's largest contributor to research, discovery, and science publishing—without weakening the role of science in policy globally? The same forces that seek to weaken science-based policymaking in the United States are also active elsewhere, including certain commercial groups and religious fundamentalists.

THE FUTURE OF SCIENCE-BASED POLICY

Two critical contributions of U.S. science are at risk: leadership on issues critical to human health and safety, and a standard of openness and debate that resists political influence.

Religious fundamentalists, not only in the United States but everywhere in the world, might welcome an era in which science is no longer relied on to advance knowledge and improve the quality of life. However, most Americans would be distressed to learn that U.S. policies on stem cell research, global warming, and condoms—all driven at present by politics rather than science—are already diminishing the effectiveness of humanitarian nongovernmental and international organizations globally.

In general, the civilian sector of U.S. society has set high ethical and scientific standards. What will science in the world look like if civilian science in the United States ceases to be open and nonpolitical? Will we cease to encourage similar ideals everywhere?

ABOUT THE AUTHOR

Anthony Robbins is a public health physician with an MPA from the Kennedy School of Government. His research interests include environmental and occupational health, and vaccine research and development. He served as Director of NIOSH in 1978–81, principal staff member for health, House Committee on Energy and Commerce (1981–1986), and President of the American Public Health Association (1983). He is currently a professor in the Department of Public Health and Family Medicine at Tufts University and coeditor, *Journal of Public Health Policy*. This article is based on an invited talk at the ISEE 2004 meeting in New York City.

REFERENCES

1. Revkin AC, Seelye KQ. Report by EPA leaves out data on climate change. *New York Times*. June 19, 2003;A1: [Context Link]

2. Tiemann M, RS. 2: Arsenic in drinking water: recent regulatory developments and issues. *Congressional Research Service Report*. August 2001;2067:23. [Context Link]

3. Ferber D. HHS intervenes in choice of study section members. *Science*. 2002;298:1323. **Bibliographic Links** | **Library Holdings** | [Context Link]

4. 68 Fed. Reg. 48668 (August 14, 2003). Proposed standard echoing a compliance guide that allows mine operators to substitute the use of personal protective equipment (PPE), such as masks, for compliance with the interim limit. [Context Link]

5. Federal Advisory Committee Act, Pub. L. No. 92–463 (October 6, 1972). [Context Link]

6. Weiss R. HHS Seeks science advice to match Bush views. *Washington Post*. September 17, 2002:A01. [Context Link]

7. Greenberg D. Government Science Advisory Committees. *National Public Radio: Talk of the*

Nation/Science. January 10, 2003. [Context Link]

8. Michaels D, Bingham E, Boden L, et al. Advice without dissent. *Science*. 2002;298:703. **Bibliographic Links** | **Library Holdings** | [Context Link]

9. Office of Management and Budget. Peer Review and Information Quality Proposed Bulletin and Request for Comment, August 29, 2003:1. [Context Link]

10. 68 Fed. Reg. 178 (September 15, 2003), p 54027. [Context Link]

11. Kaiser J. Science and regulation. A White House mandate for more peer review. *Science*. 2003;301:1307. **Bibliographic Links** | **Library Holdings** | [Context Link]

12. Office of Management and Budget. Revised Information Quality Bulletin for Peer Review. April 15, 2004. [Context Link]

13. Office of Management and Budget. Final Information Quality Bulletin for Peer Review. December 15, 2004. [Context Link]

14. Restoring Scientific Integrity in Policymaking. Available at: http://www.ucsusa.org/global_environment/rsi/page.cfm?pageID=1320 . [Context Link]

15. Hileman B. Ensuring sound science. *Chemical and Engineering News*. 2004;82:18–21. [Context Link]

16. Mooney C. Science wars. *Boston Globe*. November 21, 2004. [Context Link]

Accession Number: 00001648-200505000-00021