

“POLITICAL” SCIENCE: REGULATORY SCIENCE AFTER THE BUSH ADMINISTRATION

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On April 23, 2008, the Union of Concerned Scientists, a public interest organization in Washington, D.C., released a survey it had conducted of scientists who worked for the Environmental Protection Agency (EPA).¹ The survey found that almost 900 of the 1,600 scientists who worked for the EPA had experienced political interference in their work over the last five years.² Scientists at three other agencies also reported to the Union of Concerned Scientists similar interference. The other agencies were the Food and Drug Administration (FDA),³ which regulates the safety of pharmaceutical drugs and food, the Fish and Wildlife Service,⁴ which protects wild animals and their habitats, and the National Oceanic and Atmospheric Administration (NOAA),⁵ which, among other duties, studies climate change.

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1. UNION OF CONCERNED SCIENTISTS, VOICES OF EPA SCIENTISTS: HUMAN HEALTH AND THE ENVIRONMENT DEPEND ON INDEPENDENT SCIENCE (2008), *available at* http://www.ucsusa.org/assets/documents/scientific_integrity/epa-survey-brochure.pdf; UNION OF CONCERNED SCIENTISTS, SURVEY: EPA SCIENTISTS (2007): HUMAN HEALTH AND THE ENVIRONMENT DEPEND ON INDEPENDENT SCIENCE (2008), *available at* http://www.ucsusa.org/scientific_integrity/abuses_of_science/survey-of-epa-scientists.html.

2. UNION OF CONCERNED SCIENTISTS, VOICES OF EPA SCIENTISTS: HUMAN HEALTH AND THE ENVIRONMENT DEPEND ON INDEPENDENT SCIENCE (2008), *available at* http://www.ucsusa.org/assets/documents/scientific_integrity/epa-survey-brochure.pdf.

3. UNION OF CONCERNED SCIENTISTS, VOICES OF SCIENTISTS AT FDA: PROTECTING PUBLIC HEALTH DEPENDS ON INDEPENDENT SCIENCE (2008), *available at* http://www.ucsusa.org/assets/documents/scientific_integrity/fda-survey-brochure.pdf.

4. UNION OF CONCERNED SCIENTISTS, U.S. FISH & WILDLIFE SERVICES SURVEY SUMMARY (2005), *available at* http://www.ucsusa.org/assets/documents/scientific_integrity/fws_survey_summary_1.pdf; *see also* UNION OF CONCERNED SCIENTISTS, SURVEY: U.S. FISH & WILDLIFE SERVICE SCIENTISTS (2005) (2005), *available at* http://www.ucsusa.org/scientific_integrity/abuses_of_science/us-fish-wildlife-service.html

5. UNION OF CONCERNED SCIENTISTS, SURVEY OF NOAA FISHERIES SERVICE EMPLOYEES (2005), *available at* http://www.ucsusa.org/assets/documents/scientific_integrity/NOAA_Fisheries_Full_Survey_Results_1.pdf; *see also* UNION OF CONCERNED SCIENTISTS,

One of the primary ways that the Bush Administration has interfered with agency science has been to change scientific results or to repress them. Perhaps the most notorious example involves Philip Cooney, who was chief of staff of the White House Council on Environmental Quality until 2005.⁶ Prior to becoming a government official, he worked for various oil companies.⁷ Cooney edited scientific reports to overemphasize the scientific uncertainty of a human role in global climate change and to deemphasize the scientific evidence in support of such a role.⁸ Similarly, scientists at the FDA and the U.S. Fish and Wildlife Service report that they were asked to change information or alter conclusions in scientific reports for non-scientific reasons.⁹ In other instances, administration officials have attempted to suppress inconvenient scientific information by refusing to permit agency scientists to publish scientific papers or to make presentations at scientific meetings.¹⁰

The Administration has also engaged in science denial. The most obvious example is its refusal to acknowledge or to act on the overwhelming scientific evidence of global climate change,¹¹ but this is not the only instance of such activity. The FDA, for example, refused to approve Plan B, an emergency contraceptive, despite the fact that two scientific advisory committees had overwhelmingly found that the drug was safe and effective.¹² In light of the advisory committees'

SUMMARY OF NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION FISHERIES SERVICE SCIENTIST SURVEY (2005), *available at* http://www.ucsf.edu/scientific_integrity/abuses_of_science/survey-noaa-fisheries.html.

6. SETH SHULMAN, UNDERMINING SCIENCE: SUPPRESSION AND DISTORTION IN THE BUSH ADMINISTRATION, 18–21 (2006).

7. *Id.*

8. *Id.*; Carl Hulse, *National Briefing Washington: Senators Seek Inquiry*, N.Y. TIMES, June 30, 2005, *available at* <http://query.nytimes.com/gst/fullpage.html?res=9C04E5DB133AF933A05755C0A9639C8B63&scp=1&sq=National%20Briefing%20Washington:%20Senators%20Seek%20Inquiry&st=cse>.

9. A survey of Food and Drug Administration (FDA) scientists by the Union of Concerned Sciences found that nearly one-fifth of the 997 scientists who responded to the study said that they “have been asked, for non-scientific reasons, to inappropriately exclude or alter technical information or their conclusions in a FDA scientific document.” VOICES OF FDA SCIENTISTS, *supra* note 3. A joint survey conducted by the Union of Concerned Scientists and the Public Employees for Environmental Responsibility found that close to one-fifth of the respondents at the U.S. Fish and Wildlife Service reported that they had been instructed inappropriately to exclude or alter technical information from a scientific document. SHULMAN, *supra* note 6, at 83; *see also* sources cited *supra* notes 3–5.

10. SHULMAN, *supra* note 6, at 83.

11. *Id.* at 16–30.

12. *Id.* at 46–49.

recommendations, the FDA's weak efforts to justify the outcome strongly suggest that the Bush Administration was supporting the reproductive agenda of its religious supporters.¹³

These attacks on the integrity of science have not gone unnoticed.¹⁴ According to one author, "[t]he degree of lying, deception, and manipulation of information reported across so many federal agencies would seem to have required in the administration of George W. Bush a combination of callousness, mendacity, and hubris that is rare even in the messy history of American politics."¹⁵ Members of the American scientific community have also responded. In 2006, more than 10,000 scientists—including 52 Nobel Laureates—signed a statement that denounces political interference with science in government and calls for reform.¹⁶

Here, I want to analyze how the administrative process is used in the United States to minimize political interference of this type. I will describe the institutional arrangements that are used to reduce the influence of politics in regulatory decision-making, and I will assess the accomplishments of some of these arrangements. I will then return to the politicization of regulatory science in the Bush Administration and discuss some lessons that we have learned in this area over the past eight years.

I. THE PROGRESSIVES AND SCIENCE

The origin of the modern administrative agency dates back to the 1880s and reflects the influence of the Progressives.¹⁷ It was the

13. *Id.* at 49–56.

14. For an overview of the politicization of science in the Bush Administration, see SHULMAN, *supra* note 6; CHRIS MOONEY, *THE REPUBLICAN WAR ON SCIENCE* (2005); UNION OF CONCERNED SCIENTISTS, *SCIENTIFIC INTEGRITY IN POLICYMAKING: AN INVESTIGATION INTO THE BUSH ADMINISTRATION'S MISUSE OF SCIENCE* (2004), available at <http://www.americanprogress.org/kf/ucsintegrity.pdf>; SPECIAL INVESTIGATIONS DIVISION, MINORITY STAFF OF THE COMMITTEE ON GOVERNMENT REFORM, U.S. HOUSE OF REPRESENTATIVES, *POLITICS AND SCIENCE IN THE BUSH ADMINISTRATION: PREPARED FOR REP. HENRY A. WAXMAN* (Aug. 2003), available at http://oversight.house.gov/features/politics_and_science/pdfs/pdf_politics_and_science_rep.pdf.

15. SHULMAN, *supra* note 6, at xv.

16. Press Release, Union of Concerned Scientists, 10,600 Scientists Condemn Political Interference in Science (Dec. 11, 2006), http://www.ucsusa.org/news/press_release/10600-scientists-condemn.html.

17. MORDECAI LEE, *BUREAU OF EFFICIENCY: REFORMING LOCAL GOVERNMENT IN THE PROGRESSIVE ERA 15–17* (Thomas J. Jablonsky, ed., 2008).

Progressives who introduced the idea that regulatory decisions should be made by persons with scientific and professional training.¹⁸

The Progressives objected to the business monopolies, unscrupulous corporations, and corrupt politicians that were prominent in the United States during the 1880s.¹⁹ As a solution to the problems these institutions posed, the Progressives supported establishing government agencies to regulate corporations and monopolies, but they were also concerned that the political corruption prevalent at the time would spread to these new agencies.²⁰ They therefore supported a civil service system of hiring and promoting government employees based on their qualifications and job performance instead of their political patronage.²¹ More generally, the Progressive political movement supported expertise as a solution to political corruption.²²

The Progressives' faith in expertise was influenced by the development of scientific rationalism that was occurring in the United States at the time.²³ Scientific rationalism proposed that human and organizational behavior was the product of relationships that could be rationally deduced and described by empirical and objective inquiry.²⁴ The Progressives therefore understood science to be a non-political and impartial methodology that would insulate government from an undesirable political environment.²⁵

The idea that expertise is a way of reducing political interference in the administrative process remains a foundational idea today, but it is also clear that the Progressives were mistaken in their idea that a professionalized bureaucracy was sufficient in and of itself to ensure good and accountable government. One reason this idea is mistaken is that the administrators who run regulatory agencies may not follow the advice that scientists give them. The other reason is that science

18. Sidney A. Shapiro & Richard E. Levy, *Heightened Scrutiny of the Fourth Branch: Separation of Powers and the Requirement of Adequate Reasons for Agency Decisions*, 1987 DUKE L.J. 387, 392–93 (1987).

19. *Id.*

20. *Id.*

21. *Id.*; LEE, *supra* note 17, at 16.

22. LEE, *supra* note 17, at 16.

23. Shapiro & Levy, *supra* note 18, at 393.

24. EDWARD A. PURCELL, JR., *THE CRISIS OF DEMOCRATIC THEORY: SCIENTIFIC NATURALISM & THE PROBLEM OF VALUE* 5–12 (1973).

25. LEE, *supra* note 17, at 15–17.

cannot provide definitive answers to important questions that agencies must resolve in order to regulate.

A. Administrators Who Ignore Expertise

The political appointee in charge of an agency may choose not to follow the advice of the professionals working for the agency because following that advice conflicts with some personal motive, such as advancing his or her career by pleasing a political constituency of the President. Public choice theory, the dominant explanation of governmental behavior in political science and economics, explicitly predicts such outcomes.²⁶ This approach describes administrators as private individuals who seek to maximize their own utility, rather than as government officials primarily concerned with the public interest.²⁷ Just as businessmen seek to maximize their profit, public officials act to accumulate power, prestige, or other advantages that are in their self-interest. The administrator will therefore supply regulatory outcomes that favor the interest groups in the best position to support the person's ambitions.²⁸ These are often the very business firms that the agency is supposed to regulate, a result often described as "agency capture," because such firms find it more profitable to organize politically to support their self-interest than do members of the public or the groups that represent the public.²⁹

As I will develop, the public choice description of administration is incomplete and sometimes misleading. But these qualifications do not mean that agencies will not be captured in the manner that the theory predicts. Jeffrey Holmstead, who was appointed by President George W. Bush to head the EPA's Office of Air and Radiation, is a

26. Sidney A. Shapiro, *Symposium: Keeping the Baby and Throwing Out the Bathwater: Justice Breyer's Critique of Regulation*, 8 ADMIN. L.J. AM. U. 721, 722 (1995) ("The sellers [of regulation] are public officials who make regulatory decisions according to their own self-interest.").

27. *Id.* (citing DANIEL A. FARBER & PHILIP P. FRICKEY, LAW AND PUBLIC CHOICE: A CRITICAL INTRODUCTION 22 (1991); ANTHONY DOWNS, INSIDE BUREAUCRACY 44 (1967)) ("Legislators respond to buyers who offer support for reelection, while agency officials respond to buyers who can assist them to obtain additional power and prestige.").

28. ANTHONY DOWNS, AN ECONOMIC THEORY OF GOVERNMENT 27-28 (1957).

29. Shapiro, *supra* note 26, at 723 (citing MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS 43-52 (1971)) ("When a regulatory decision benefits the members of such a group at the expense of thousands of citizens, the members of the industry or producer group have an economic incentive to engage in collective political action.").

good example. Holmstead came to the EPA from the law firm of Latham & Watkins where, among other clients, he represented the Alliance for Constructive Air Policy, an electric utility trade group whose goal is to weaken the Clean Air Act. As reported in the *St. Louis Post-Dispatch*, Holmstead “helped craft new standards for mercury emissions from coal-fired power plants. As the rules were being written, career EPA staff members were told by Mr. Holmstead . . . not to carry out the usual scientific and economic reviews.”³⁰ Worse, perhaps, “[k]ey passages in the new standards were copied word-for-word from memos prepared by the Washington lobbying [law] firm of Latham & Watkins,” where, of course, Holmstead had worked before his appointment.³¹ Holmstead also testified before Congress that EPA officials did not believe that proposed changes to a set of regulations called New Source Review³² “could seriously undermine the E.P.A.’s lawsuits against . . . violators” of the Clean Air Act, when his staff in fact had warned him that the changes *would* have this effect.³³

I understand that claims an administrator has favored regulated entities for personal, rather than policy, reasons may be in the eye of the beholder. What appears to be unreasonable to an environmental organization may be a sensible policy in the eyes of the chemical industry. Nevertheless, when an administrator ignores scientific evidence, or seeks to alter such evidence, in order to reach a decision favorable to a regulated entity, it is a reasonable inference that the administrator is acting in the manner public choice theory predicts. As the polling data from the Union of Concerned Scientists indicates, this form of capture was routine in the Bush Administration.³⁴

30. Editorial, *An Unsuitable Appointment at the EPA*, ST. LOUIS POST-DISPATCH, May 1, 2006, at D8, available at 2006 WLNR 7446629.

31. *Id.*

32. New Source Review (NSR) is a part of the 1977 Clean Air Act Amendments and requires permits for the construction of any new or modified pollution-emitting structure in order to make sure that such structure will not reduce air quality beyond certain limits. For more information, see <http://www.epa.gov/NSR/>.

33. Bruce Barcott, *Changing All the Rules*, N.Y. TIMES, Apr. 4, 2004, available at <http://query.nytimes.com/gst/fullpage.html?res=990CE3D61E30F937A35757C0A9629C8B63&scp=1&sq=changing%20all%20the%20rules&st=cse>.

34. UNION OF CONCERNED SCIENTISTS, *supra* notes 1, 3–5.

B. Science Has Its Limits

Science can inform regulatory decision-making in useful ways, which is why scientists have been so concerned with the anti-science actions of the Bush Administration. Nevertheless, many regulatory issues are “trans-scientific,” which means that, although they can be stated as scientific questions, they are not capable of being resolved because of the state of scientific knowledge or because of the lack of accessible scientific data.

The assessment of risks posed by dangerous chemicals offers a good illustration of this limitation. In the environmental statutes, Congress has established a “risk trigger” that indicates when a risk is significant enough that it requires regulation.³⁵ The burden of proof for meeting the requirements of a risk trigger is stated in different ways in different statutes.³⁶ A typical formulation is that Congress requires an agency to regulate on the basis of anticipated harm.³⁷ The EPA, for example, is required under the Clean Air Act to regulate sources of pollution that may cause or contribute to “air pollution which may reasonably be anticipated to endanger public health or welfare.”³⁸

In making determinations about a risk trigger, agencies seldom have conclusive evidence about the risks posed by chemicals. As the National Academy of Sciences has explained, “[D]ata may be incomplete, and there is often great uncertainty in estimates of the types, probability, and magnitude of health effects associated with a chemical agent . . . and of the extent of current and possible future human exposures. These problems have no immediate solutions. . . .”³⁹ The lack of definitive scientific evidence does not mean that regulation is inappropriate. As noted, Congress has required agencies to regulate on the basis of potential risk to humans, rather than waiting for definitive evidence that a substance is harmful.⁴⁰

35. See SIDNEY SHAPIRO & ROBERT L. GLICKMAN, *RISK REGULATION AT RISK: RESTORING PRAGMATIC APPROACH* 33–35 (2003) (discussing Congress’ decision to include risk triggers in environmental statutes).

36. *Id.*

37. *Id.*

38. 42 U.S.C.A. § 7411(b)(1)(A) (West 2008).

39. NATIONAL ACADEMY OF SCIENCES, *RISK ASSESSMENT IN THE FEDERAL GOVERNMENT: MANAGING THE PROCESS* 11 (1983).

40. SHAPIRO & GLICKMAN, *supra* note 35.

In order to determine whether incomplete scientific information is sufficient to meet the requirements of a risk trigger, agencies employ certain assumptions to overcome problems in the lack of data. These methodologies reflect scientific knowledge, but they are not the product purely of scientific expertise; they also reflect policy preferences. For example, agencies typically assume in the absence of evidence to the contrary that a carcinogen has no threshold concentration below which the substance poses no risk of causing cancer.⁴¹ While this assumption is based on general scientific knowledge about cancer, agencies employ it because it is consistent with a statutory mandate to act on the basis of anticipated harm.⁴² The assumption serves a precautionary purpose because it errs on the side of overestimating the extent of harm, rather than underestimating it.

The trans-scientific nature of many regulatory issues does not mean that science is not useful in resolving many such issues, although the degree of assistance will vary. Scientific knowledge and evidence point the agency in the direction it needs to go. But science will offer an agency operating on the frontiers of science less direction than it would if more were known.

II. ENTER THE LAWYERS

Decisions about risks require science, but we do not rely only on scientific expertise to ensure the accountability of regulatory agencies. Administrators may ignore the science, and in any cases, science cannot provide definitive answers to important questions that agencies must resolve in order to regulate. Since 1946, the country has relied on the legal procedures mandated by the Administrative Procedure Act (APA)⁴³ to offer another layer of protection against the misuse of administrative power.

Legal procedures work to ensure an agency's compliance with its statutory mandate by reinforcing the role of scientific expertise. The courts review agency decisions on the basis of the rulemaking record

41. See NATIONAL ACADEMY OF SCIENCES, *supra* note 39, at 54–55 (describing the method by which Congress and agencies have historically determined the danger of carcinogens).

42. *Id.*

43. Pub. L. No. 404, 60 Stat. 237 (1946) (codified at 5 U.S.C.A. §§ 551–559, 701–706, 1305, 3344, 4301, 5335, 5372, 7521 (West 2007)).

compiled by an agency.⁴⁴ These records are a compilation of the scientific, economic, and other types of evidence relevant to the agency's regulatory decision. In order to comply with the APA, the courts expect agencies to have sufficient evidence to support the rationality of a policy decision.⁴⁵ Agencies cannot merely assert that an outcome is consistent with a statutory mission; they must support this assertion with data and expert opinion.⁴⁶ In determining whether the evidence is sufficient, judges also consider contradictory evidence offered by regulated entities and their beneficiaries.⁴⁷ More broadly, legal procedures work to ensure an agency's compliance with its statutory mandate by reviewing its policy decisions and determining whether they are consistent with those intended by Congress.

I noted earlier that public choice theory is incomplete and sometimes misleading. One reason, as Professor Stephen Crowley has stated, is that it fails to credit administrative procedures for deterring self-serving decisions by administrators.⁴⁸ Crowley documents a number of regulatory decisions that adopt regulations over the objections of regulated entities, which contradicts the public choice prediction that agencies are doomed to be captured by the entities that they regulate.⁴⁹ As Crowley notes, however, legal procedures do not guarantee that agencies are never captured.⁵⁰ For example, the courts may have difficulty determining if an agency is acting consistently with its statutory mission when Congress states that mission in vague and general terms.⁵¹ The courts also have difficulty policing the lack of action by an agency, which can result from

44. *See, e.g.*, *Fla. Power & Light Co. v. Lorion*, 470 U.S. 729, 743–44 (1985) (“The task of the reviewing court is to [judge] the agency decision based on the record the agency presents to the reviewing court.”).

45. *See, e.g.*, *Motor Vehicle Mfrs. Ass’n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 103 (1983) (“[An] agency must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’” (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962))).

46. *Id.*

47. *Shoreham Coop. Apple Producers Ass’n v. Donovan*, 764 F.2d 135, 140–41 (2d Cir. 1985) (“[T]he agency is obligated to examine the available evidence and . . . should take account of evidence placed before the agency by interested parties . . .”).

48. STEVEN P. CROLEY, *REGULATION AND PUBLIC INTERESTS* 258–83 (2008).

49. *Id.* at 249–57.

50. *Id.* at 248.

51. *Id.* at 99–101.

political pressure by regulated entities opposing regulation.⁵² This has particularly been a problem in the Bush Administration, which has been a reluctant regulator to say the least. When such gaps exist, there is room for the politicization of science to occur.

Ultimately, reliance on the courts to ensure accountability runs into an intractable difficulty. The federal judiciary is not elected; judges are appointed. Moreover, once appointed, they have life-time tenure. This combination creates the potential for unelected judges with lifetime tenure to substitute their ideas about regulatory policy for the solutions preferred by regulatory agencies. Indeed, there is persuasive empirical evidence that this has occurred. A number of studies correlate the outcome of a case with whether a judge has been appointed by a Republican or Democratic president, which is used as a proxy for ideology.⁵³ The results demonstrate that a judge's ideology is a reliable predictor of the outcome of a case.⁵⁴ For example, Professor Revesz has found that challengers seeking more stringent health-and-safety regulations prevailed in 50.3 percent of cases involving at least two judges appointed by Democratic presidents, but in only 27.8 percent of cases before panels in which at least two of the judges were appointed by Republican presidents.⁵⁵ Other studies have

52. *Id.*

53. See, e.g., Frank B. Cross & Emerson H. Tiller, *Judicial Partisanship and Obedience to Legal Doctrine: Whistleblowing on the Federal Courts of Appeals*, 107 YALE L.J. 2155, 2169 (1998) (finding panels in the D.C. Circuit controlled by judges appointed by Republican presidents issued conservative decisions in 54% of cases in which the *Chevron* doctrine was applied, whereas panels controlled by judges appointed by Democratic presidents judges rendered liberal decisions in 68% of *Chevron* cases); Richard J. Pierce, Jr., *Is Standing Law or Politics?*, 77 N.C. L. REV. 1741, 1759–60 (1999) (finding that courts denied standing to environmental plaintiffs in 29% of cases, but “Republican judges voted to deny standing to environmental plaintiffs in 43.5% of cases, while Democratic judges voted to deny standing to environmental plaintiffs in only 11.1% of cases,” and finding that Republican judges on the D.C. Circuit denied standing in 79.2% of the cases, while Democratic judges on the D.C. Circuit did so in only 18.2% of the cases); Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717, 1763 (1997) (finding that panels in the D.C. Circuit dominated by judges appointed by Republican presidents found fatal flaws in the reasoning the EPA used to support rules in up to 89% of cases, while panels dominated by judges appointed by Democratic presidents found such flaws in no more than 13% of cases); Cass R. Sunstein, David Schkade & Lisa Michelle Ellman, *Ideological Voting on Federal Courts of Appeals: A Preliminary Investigation*, 90 VA. L. REV. 301, 318, 322–23 (2004) (finding that judges appointed by Republican presidents voted against industry challenges to EPA rules in 46% of cases, and judges appointed by Democratic presidents voted against such challenges in 64% of cases).

54. See sources cited *supra* note 53.

55. Richard L. Revesz, *Congressional Influence on Judicial Behavior? An Empirical Examination of Challenges to Agency Action in the D.C. Circuit*, 76 N.Y.U. L. REV. 1100, 1104 (2001).

found similar results.⁵⁶ This may weaken agency accountability for the misuse of science.

III. REDUCING POLITICIZATION OF SCIENCE

To sum up, the regulatory system is based on the two underlying concepts of controlling agency discretion. First, to some extent, it trusts in scientific expertise. We expect that agencies will use their expert judgment, and to the extent that this happens, courts will defer to that judgment. At the same time, we do not entirely trust in agency expertise. Courts review regulations in recognition that agencies may ignore the science and, in any case, regulatory decisions are not purely based on science.

With this background in mind, we can return to the actions of the Bush Administration and understand why they are so troubling. First, members of the administration have sought to change or alter scientific results.⁵⁷ This effort is an attack on the integrity of a fundamental protection against the misuse of regulatory power. One of the ways that the courts identify corruptive political interference is to ask whether the agency's decision makes sense in light of the evidence in the rulemaking record.⁵⁸ If agency officials change that evidence to accord with their political preferences, this safeguard will not work.

Second, members of the Bush Administration have engaged in science denial. As mentioned earlier, the administration's refusal to act regarding global climate change is probably the best example of this head-in-the-sand attitude.⁵⁹ The judicial system, however, is not very good at policing the lack of action. In this manner, the administration's disregard of science may delay necessary regulation by years.

As we move forward, what, if anything, can be done to discourage the politicization of science? The best thing, of course, is for political officials to respect and take into serious consideration what science

56. See sources cited *supra* note 53.

57. SHULMAN, *supra* note 6, at 18–24, 31–32, 82–83.

58. See, e.g., *Motor Vehicle Mfrs. Ass'n of United States v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42 (1983) (holding that there is a presumption against changes in regulatory policy not justified by the rulemaking record).

59. SHULMAN, *supra* note 6 and accompanying text.

has to teach us. Whether such consideration can be mandated, or at least encouraged, by the use of administrative procedures is a pressing and difficult issue.

I have two proposals. When Congress created the Occupational Safety & Health Administration (OSHA), it created a science agency to assist OSHA, the National Institute of Occupational Safety and Health (NIOSH). Congress, however, located NIOSH not in the Department of Labor, where OSHA is located, but in the Department of Health and Human Services because it wanted to protect the scientific advice issued by NIOSH from political influence. This solution has one important difficulty: it creates coordination problems. Scientists in an independent agency will not necessarily work according to an agency's priorities.⁶⁰

There may be another way to protect the integrity of scientific advice. Congress could require that an agency publish scientific documents without edits or alterations by agency officials. Currently, under the Freedom of Information Act (FOIA), there is an exemption for "inter-agency memorandums . . . which would not be available by law to a party other than an agency in litigation with the agency."⁶¹ The legislative history makes it clear that the exemption was intended to incorporate the government's common law privilege from discovery in litigation.⁶² According to the Supreme Court, this privilege includes "executive privilege material" or pre-decisional documents.⁶³ The reason for the privilege, as you would suppose, is to protect open and frank advice and recommendations from government employees to their superiors.

Under the FOIA exemption, scientific advice and reports from agency staff to agency officials are generally not available to the public because they fall within the ambit of pre-decisional documents.⁶⁴ This secrecy, however, facilitates interference with

60. THOMAS O. MCGARITY & SIDNEY A. SHAPIRO, *WORKERS AT RISK: THE FAILED PROMISE OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION* 39-40 (1993).

61. 5 U.S.C.A. § 552(b)(5) (West 2007).

62. H.R. REP. NO. 89-1497 (1966), *reprinted in* 1966 U.S.C.C.A.N. 2418, 2427-28.

63. *See, e.g., United States v. Nixon*, 418 U.S. 683, 708 (1974) (discussing executive privilege in the context of communications with the President).

64. *See, e.g., Nat'l Wildlife Fed'n v. U.S. Forest Serv.*, 861 F.2d 1114, 1116-17 (9th Cir. 1988) (holding that agency information is exempted from FOIA if it is both pre-decisional and deliberative); *Petroleum Info. Corp. v. U.S. Dep't of Interior*, 976 F.2d 1429, 1435

science. Under a veil of secrecy, agency officials have greater leeway to change scientific documents or to ignore them. I would therefore urge Congress to consider eliminating the FOIA exception as it applies to certain categories of scientific documents and to require instead that such documents be made public as they are finished and before they are submitted to the political officials of the agency.

The argument against this proposal, of course, is that it will prevent agency officials from receiving the fullest and most candid advice. I do not think this objection has much force in this situation, however. The advice being received is about the state of the science and not about what action the agency should take based on the science. Thus, although the information is relevant to the agency's decision, it is not advice and recommendations concerning a regulatory decision, so it does not fall within the full ambit of a pre-decisional document.

IV. CONCLUSION

The Administration of George W. Bush was no friend of regulatory science. Agency administrators changed, repressed, or ignored significant science information that did not coincide with the Administration's ideological preferences. While science seldom indicates what regulatory outcome is best, it is often essential to making informed regulatory decisions. The perversion of science that occurred in the Bush Administration is therefore important to understand and to counter.

Giving scientists an independent voice may be an effective way of countering interference with science. This can be done by requiring agencies to publish science documents without edits or alterations by political officials. There may be other useful remedies as well. In light of the "political" science practiced by the Bush Administration, devising appropriate responses deserves our attention.

(D.C. Cir. 1992) ("To fall within the deliberative process privilege, materials must bear on the formulation or exercise of agency policy-oriented *judgment*.").