

IS COST-BENEFIT ANALYSIS NEUTRAL?

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Cost-benefit analysis (CBA) owes much of its appeal to its image as a neutral principle for deciding upon the appropriate stringency of environmental, health, and safety regulation. This Article examines whether CBA is neutral in effect—i.e. whether it sometimes makes regulations more stringent or regularly leads to weaker environmental, health, and safety protection. Using a representative data set from recent Office of Management and Budget (OMB) reviews, an examination of OMB prompt letters, and a literature review, this Article shows that CBA has almost always proven anti-environmental in practice. It also shows that the most common approaches to CBA are anti-environmental in theory.

INTRODUCTION

Environmentalists generally oppose cost-benefit analysis (CBA) and regulated industry generally supports it.¹ Both sides have attorneys with extensive experience lobbying for regulatory outcomes favoring their constituents' interests and know a great deal about the process of regulation. Therefore, their juxtaposed positions on regulatory CBA provide

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1. THOMAS O. MCGARITY, REINVENTING RATIONALITY: THE ROLE OF REGULATORY ANALYSIS IN THE FEDERAL BUREAUCRACY 149–50 (1991) (“regulatees” support CBA, but “regulatory beneficiaries uniformly oppose it”). See also ROBERT PERKS ET AL., REWRITING THE RULES: THE BUSH ADMINISTRATION’S ASSAULT ON THE ENVIRONMENT 24 (2002) (the Natural Resources Defense Council claims that the Office of Management and Budget “is using biased cost-benefit analysis . . . to block meaningful environmental proposals”); Zygmunt J.B. Plater, *Environmental Law as a Mirror of the Future: Civic Values Confronting Market Force Dynamics in a Time of Counter-Revolution*, 23 B.C. ENVTL. AFF. L. REV. 733, 747 (1996) (CBA has been a “tactical favorite” of anti-regulatory lobbyists); Barton H. Thompson, Jr., *What Good Is Economics?*, 37 U.C. DAVIS L. REV. 175, 179 (2003) (“opponents of government regulation” have been CBA’s “principal proponents”).

powerful evidence that CBA favors industry and disfavors health, safety, and environmental protection.

Nevertheless, University of Chicago Law Professor Cass Sunstein writes that CBA is “for everyone.”² He portrays CBA as sometimes making regulation more stringent and sometimes making it less stringent, suggesting that its net effect might be neutral.³

This article will examine the question of whether CBA is neutral historically, doctrinally, and theoretically. For the most part, this article focuses upon neutrality as advocates of CBA implicitly define it. Their idea that CBA sometimes makes environmental, health, and safety protections more stringent and sometimes less stringent suggests that CBA has a neutral effect. CBA has a neutral effect if it does not move regulation in one generally predictable direction, either toward greater or lesser stringency. If it moves regulation toward lesser stringency almost all of the time, it cannot be neutral.

Analysis of CBA’s effect requires comparison of a regulation as influenced by CBA with some baseline, an agency proposal arrived at using some other statutory criteria and analysis. For example, many environmental rules coming from EPA reflect some EPA judgment about what reductions are feasible with existing technology.⁴ Proposals based on a feasibility principle are unlikely to be draconian because they reflect consideration of cost and a preference for avoiding plant shutdowns.⁵ This article will compare the effect of a proposal under existing statutory criteria to changes reflecting application of CBA to evaluate the issue of neutral effect.

Regulatory reformers’ claim that CBA has a largely neutral effect in this sense is an essential element of their case for it. The law professors supporting regulatory reform have never argued that environmental regulation is too stringent across the board. Rather, they have used data showing uneven expenditures of dollars spent per life saved to argue that

2. CASS R. SUNSTEIN, *THE COST-BENEFIT STATE: THE FUTURE OF REGULATORY PROTECTION* 137 (2002).

3. See, e.g., Cass R. Sunstein, *The Arithmetic of Arsenic*, 90 GEO. L.J. 2255, 2265 (2002) (supporting statement that “people with diverse views” should support CBA with examples of CBA producing “more stringent and rapid regulation”); CASS R. SUNSTEIN, *RISK AND REASON: SAFETY, LAW, AND THE ENVIRONMENT* 26–27 (2002) (citing examples of CBA causing “more stringent and rapid regulation”).

4. See Bruce A. Ackerman & Richard B. Stewart, Comment, *Reforming Environmental Law*, 37 STAN. L. REV. 1333, 1334–35 (1985) (characterizing the existing system as based primarily upon requiring the best available technology).

5. See David M. Driesen, *Distributing the Costs of Environmental, Health, and Safety Protection: The Feasibility Principle, Cost-Benefit Analysis, and Regulatory Reform*, 32 B.C. ENVTL. AFF. L. REV. 1, 9–16 (2005) (explaining how the feasibility principle constrains stringency).

some regulation needs strengthening and some needs weakening, so that greater consistency can arise.⁶ They characterize the needed reform, not as weakening environmental protection, but as improving priority setting.⁷ If CBA only makes regulation weaker, and never strengthens overly weak regulation, it cannot improve priority setting and consistency in the manner its proponents envision. This article will also examine the idea of CBA as a value neutral and therefore objective exercise. Finally, this article will look at CBA as a form of procedural neutrality, offering a neutral procedure for developing regulation.⁸

The position that CBA constitutes a neutral reform has great intuitive appeal. Many academics and policy-makers may find CBA attractive precisely because of its apparent even-handedness.⁹ Indeed, CBA seems to offer precisely what lawyers usually expect a neutral procedure to provide: full consideration of both sides of a case. Perhaps we should regard CBA as a neutral principle, because it looks like a neutral decisionmaking procedure.¹⁰ The idea of neutral principles in constitutional law has proven extremely attractive to many legal scholars, so the notion that CBA is neutral may explain some of its intuitive appeal to many academics.¹¹

Yet, CBA poses a paradox. On the one hand, CBA appears obviously even-handed. On the other hand, the positions of advocates with decades of regulatory experience suggest it is not. This article tries to

6. See, e.g., Cass R. Sunstein, *Legislative Foreword: Congress, Constitutional Moments, and the Cost-Benefit State*, 48 STAN. L. REV. 247, 257–60 (1996) (discussing the need to reallocate resources to reduce inconsistency and misallocation of resources); STEPHEN BREYER, *BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION* 10–23 (1993) (same).

7. See Sunstein, *supra* note 6, at 257–60 (citing the need for better priority setting as the first lesson learned from regulation since the New Deal). For a critique of this view, see David M. Driesen, *Getting Our Priorities Straight: One Strand of the Regulatory Reform Debate*, 31 ENVTL. L. REP. 10003 (2001).

8. I do not claim that these ideas exhaust the possible concepts of neutrality that might be used to defend CBA. A subsequent article will address some other concepts and the question of whether neutrality is desirable in this context.

9. See FRANK ACKERMAN & LISA HEINZERLING, *PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING* 35 (2004) (“[C]ost-benefit analysis presents itself as the soul of rationality, an impartial, objective standard for making good decisions.”). See also Katharine Q. Seelye, *Bush Nominates Utah Governor to Lead Environmental Agency*, N.Y. TIMES, Aug. 12, 2003, at A1 (reporting that Mike Leavitt, Bush’s nominee to head EPA, has an environmental philosophy “based on balance”).

10. See generally Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 YALE L.J. 165, 195 (1999) (describing CBA as a “decision procedure”).

11. See Herbert Wechsler, *Toward Neutral Principles of Constitutional Law*, 73 HARV. L. REV. 1 (1959). See also ROBERT W. HAHN, *REVIVING REGULATORY REFORM: A GLOBAL PERSPECTIVE* 3–4 (2000) (selling cost-benefit analysis by referring repeatedly to “a neutral economist’s benefit-cost test”) (emphasis added).

resolve this paradox and answer the question of whether greater use of CBA constitutes a neutral reform.

Much hinges upon the outcome of this debate. CBA has gained ground over the years, aided by vigorous advocacy from industry, industry-funded conservative think tanks, and academics, including some, like Professor Sunstein, who honestly view CBA as a neutral rationalizing reform.¹² Its future progress may hinge upon whether politicians, voters, and even perhaps academics perceive it as a neutral reform, or as a reform serving regulated parties at the expense of the public beneficiaries of environmental, health, and safety protection.¹³ And both its opponents and supporters agree that CBA's fate will significantly influence the future of environmental, health, and safety regulation.¹⁴

Part One explains what CBA is and its place in environmental law. Part Two examines the neutrality question as a matter of historical fact. It asks whether CBA has, in the past, been used to weaken regulation, to make it more stringent, or to do some of both. It adds to the existing literature in two ways. First, it offers a detailed analysis of the anecdotes that support academic claims that CBA has sometimes made regulation more stringent or extensive. Second, it presents a new empirical analysis of the George W. Bush administration's use of CBA. Part Three addresses the neutrality issue as a doctrinal and theoretical question, asking whether CBA is neutral in theory. Part Four briefly elucidates the implications of the data and analysis for the regulatory reform debate. But this article does not attempt to settle the question of CBA's value. It has the more modest aim of addressing the question of CBA's neutrality. The neutrality question and the data collected here to address it do, however, have important implications for the general reform debate.

I. CBA AND ITS HISTORY

This part provides some basic background regarding CBA and its use in regulation. It defines CBA and then provides a basic history of its place in modern environmental, health, and safety law.

12. See, e.g., SUNSTEIN, *supra* note 2, at 6-7 (characterizing CBA as a device to spur "obviously" desirable regulations while deterring obviously undesirable regulations).

13. See William W. Buzbee, *Regulatory Reform or Statutory Muddle: The "Legislative Mirage" of Single Statute Regulatory Reform*, 5 N.Y.U. ENVTL. L.J. 298, 348-49 (1996) (while regulatory reform proponents assume that agencies "produce excessive regulation," they "spoke of the need for better . . . regulation").

14. See ACKERMAN & HEINZERLING, *supra* note 9, at 35 (CBA has "become a powerful weapon" for opposing regulation); SUNSTEIN, *supra* note 2, at 3 (increased cost-benefit balancing involves a "dramatic shift" in regulation).

A. CBA: A Definition

CBA of a proposed regulation consists of estimates of the regulation's costs and of the monetary value economists associate with the harms the regulation will avoid, which the literature commonly refers to as benefits.¹⁵ CBA contemplates quantification of the averted harms, including deaths, illness, and ecological destruction, in dollar terms.¹⁶ CBA advocates claim that this is often possible, but concede that regulators cannot quantify many relevant environmental and health effects.¹⁷

To estimate the cost of a regulation for purposes of CBA, the analyst must employ the same technique regulators use to develop technology-based regulations. Since the cost of making any reduction in pollution or improvement in safety equals the cost of making the technological change that will accomplish the improvement, cost analysis in both contexts requires the assessment of the capabilities and cost of technology.¹⁸ Market data generally enables regulators to estimate the direct cost of the technological improvements they envision.¹⁹ These estimates, however, usually prove too high.²⁰

The assessment of the benefits associated with a discrete pollution reduction or safety improvement, however, is much more problematic.²¹

15. See David M. Driesen, *The Societal Cost of Environmental Regulation: Beyond Administrative Cost-Benefit Analysis*, 24 *ECOLOGY L.Q.* 545, 560–61 & n.67 (1997) (distinguishing harm avoidance from benefit creation). Cf. Antonin Scalia, *Responsibilities of Regulatory Agencies Under Environmental Laws*, 24 *HOUS. L. REV.* 97, 101 (1987) (comparing CBA in the narrow sense that I use, with a broader definition of CBA).

16. William H. Rodgers, Jr., *Benefits, Costs, and Risks: Oversight of Health and Environmental Decisionmaking*, 4 *HARV. ENVTL. L. REV.* 191, 193 (1980) (defining CBA as a comparison between costs and benefits in dollar terms).

17. See, e.g., OFFICE OF INFO. & REGULATORY AFFAIRS, OFFICE OF MGMT. & BUDGET, *PROGRESS IN REGULATORY REFORM: 2004 REPORT TO CONGRESS ON THE COSTS AND BENEFITS OF FEDERAL REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES* 9 (2004), http://www.whitehouse.gov/omb/inforeg/2004_cb_final.pdf [hereinafter OMB 2004] (many of the major rules OMB has reviewed in the last 10 years "have important non-quantified" benefits and costs); SUNSTEIN, *supra* note 2, at 21 ("[Q]uantification will be . . . impossible in some cases.").

18. See Driesen, *supra* note 5, at 49–50.

19. See, e.g., Thomas O. McGarity & Ruth Ruttenberg, *Counting the Cost of Health, Safety, and Environmental Regulation*, 80 *TEX. L. REV.* 1997, 2009 (2002). This process, however, is not as simple as it might appear. See *id.*

20. See *id.* at 1998 (*ex ante* cost estimates have been higher than actual costs incurred, sometimes by orders of magnitude); Winston Harrington et al., *On the Accuracy of Regulatory Cost Estimates*, 19 *J. POL'Y ANALYSIS AND MGMT.* 297 (2000). Cf. OMB 2004, *supra* note 17, at 50–53 (claiming that some studies find that indirect costs exceed the estimated costs, which are often limited to direct costs).

21. Compare McGarity & Ruttenberg, *supra* note 19, at 2055 (noting that for some add-on control technologies, cost estimates are accurate within 30%, which is a good deal more accurate than benefits assessment), with Thomas O. McGarity, *A Cost-Benefit State*, 50

This assessment requires two extraordinarily difficult steps, first a quantitative risk assessment and then monetization of the benefits described.²² Quantitative risk assessment has proven quite daunting, because data gaps make estimating the number of illnesses, deaths, and ecological disturbances a particular regulation will avoid impossible for most health effects and nearly all ecological effects.²³ When agencies can estimate the magnitude of some health effects, that estimation usually requires a lot of guesswork in order to extrapolate estimates of a discrete regulation's impact on human health from data that often comes from laboratory tests on other species or from human experience with much larger doses than those that the rules under consideration address.²⁴

ADMIN. L. REV. 7, 53 (1998) (risk estimates can vary by five to ten orders of magnitude). See also Daniel A. Farber, *Probabilities Behaving Badly: Complexity Theory and Environmental Uncertainty*, 37 U.C. DAVIS L. REV. 145 (2003) (arguing that some environmental problems may conform to "power laws" that make catastrophic outcomes likely enough to justify a precautionary approach). In practice, agencies often resort to default assumptions and expert judgment to arrive at numerical estimates. See OFFICE OF THE SCI. ADVISOR STAFF PAPER, U.S. ENVTL. PROT. AGENCY, RISK ASSESSMENT PRINCIPLES & PRACTICES 11 (2004), <http://www.epa.gov/OSA/pdfs/ratf-final.pdf> [hereinafter EPA STAFF PAPER]. While such default assumptions sometimes allow an analysis in the face of data gaps and uncertainties, *id.* at 11, 13, they do not so much eliminate uncertainties in the underlying data as hide them. See *id.* at 13, 52 (default assumptions require science policy positions or choices). See generally Rodgers, *supra* note 16, at 197 (quantification can reduce the quality of information supplied to the decisionmaker). In principle, revelation of the reasons for the default assumptions and the uncertainties that they purport to resolve can aid transparency. EPA STAFF PAPER, *supra* at 52. But, in practice, top-level decision-makers often focus on the simple numbers and pay little attention to grasping the full range of uncertainty. See Rodgers, *supra* note 16, at 198 (often decisionmakers do not fully understand the methodology's limitations and biases). Indeed, one of the functions of quantitative risk assessment involves substituting numbers for a messy qualitative description of facts. Some commentators see hope in mathematical techniques to quantify the probabilities of various outcomes in the face of uncertainty. See, e.g., Matthew D. Adler, *Against "Individual Risk": A Sympathetic Critique of Risk Assessment*, 153 U. PA. L. REV. 1121 (2005). But EPA has cautioned that such assessments do not offer panaceas, because they often consume huge resources, only occasionally add value to the decisionmaking process, and will only prove as accurate as the data underlying them. See EPA STAFF PAPER, *supra* at 35, 41, 49. In light of this, EPA cautions that "full probabilistic models of cancer risk" are not yet generally feasible. *Id.* at 49.

22. See McGarity, *supra* note 21, at 12 (CBA in the health and environmental context begins with quantitative risk assessment).

23. See, e.g., OMB 2004, *supra* note 17, at 18 (discussing major benefits that were not quantified from reducing water pollution from animal feeding operations); Richard W. Parker, *Grading the Government*, 70 U. CHI. L. REV. 1345, 1382, 1389–1400 (2003) (explaining the difficulties with non-cancer health effects and ecological effects and giving numerous examples of failure to count non-quantifiable benefits).

24. See, e.g., EPA STAFF PAPER, *supra* note 21, at 56 (noting EPA's dependence upon animal data and data from very high concentrations of short duration); Robert W. Hahn & John A. Hird, *The Costs and Benefits of Regulation: Review and Synthesis*, 8 YALE J. ON REG. 233, 236 (1990) (because of the imprecision of tools for estimating regulatory impacts, most estimates are properly viewed as "guesstimates"). See also Donald T. Hornstein, *Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV.

Assigning monetary values to avoided illness, death, and environmental damage raises ethical questions and serious technical problems. Monetization requires very controversial value assumptions and in many cases proves impossible.²⁵

The typical outcome of CBA includes a dollar value for expected costs and a wide range of dollar values for a few quantifiable benefits. This range often proves so large that it deprives CBA of any capacity it might have to objectively guide decisionmaking.²⁶ But many important environmental, health, and safety effects cannot be quantified at all, so CBA of environmental, health, and safety decisions typically includes a long list of benefits that could not be quantified, many of which are significant in the view of experts in the area.²⁷

Regulatory reformers expect CBA to influence regulatory outcomes. In particular, CBA may influence decisions about how stringent a standard a government agency should adopt. CBA proponents sometimes articulate what I call the "indeterminate position," that regulators should consider CBA.²⁸ This position does not tell us how regulators should re-

562, 572 (1992) (the National Academy of Sciences has identified 50 "inference options," where a policy decision must be made to extrapolate a risk assessment from limited data); Oliver A. Houck, *Of Bats, Birds, and B-A-T: The Convergent Evolution of Environmental Law*, 63 MISS. L.J. 403, 415 (1994) (describing the process of deriving risk assessments for human beings from animal studies as involving "more guesswork than a television game show"); Thomas O. McGarity, *Politics by Other Means: Law, Science, and Policy in EPA's Implementation of the Food Quality Protection Act*, 53 ADMIN. L. REV. 103, 120-92 (2001) (describing in detail the data gaps and assumptions needed to assess food-related risks); Parker, *supra* note 23, at 1411 (pointing out that the range of uncertainty frequently would "viti-ate the relevance of numerical ranges"); Sidney A. Shapiro & Thomas O. McGarity, *Not So Paradoxical: The Rationale for Technology-Based Regulation*, 1991 DUKE L.J. 729, 732 n.21 (discussing the data and uncertainties underlying regulation of vinyl chloride); Wendy E. Wagner, *The Science Charade in Toxic Risk Regulation*, 95 COLUM. L. REV. 1613, 1625-27 (1995) (discussing the problem of extrapolating human health effects from high dose animal experiments).

25. See Amy Sinden, *The Economics of Endangered Species: Why Less is More in the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENVTL. L. REV. 129, 180-83 (2004) (providing examples of cases where monetization of benefits proved impossible); Parker, *supra* note 23, at 1388, 1391-98 (discussing unquantified benefits in various rules). In addition, any uncertainties in the monetization will be multiplied by the uncertainty in the risk assessment, thus making the end result even more problematic.

26. See Sunstein, *supra* note 3, at 2257 (finding that a "benefits range" sometimes proves so "exceedingly wide" that it does little to "discipline judgment").

27. See, e.g., Thomas O. McGarity, *Professor Sunstein's Fuzzy Math*, 90 GEO. L.J. 2341, 2351-52 (2002) (discussing serious health effects associated with arsenic that EPA could not quantify); Sunstein, *supra* note 3, at 2274 (same).

28. See Driesen, *supra* note 5, at 48 (explaining why a requirement to consider CBA is indeterminate). See also Adler & Posner, *supra* note 10, at 195 (describing CBA as a "decision procedure" not as a criterion); Robert W. Hahn & Cass R. Sunstein, *A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost-Benefit Analysis*, 150 U. PA.

spond to CBA.²⁹ But sometimes regulatory reformers favor a cost-benefit criterion, such as the position that the costs of regulation generally should not exceed the estimated benefits.³⁰ A criterion does tell us something about how CBA should affect regulatory decisions. This distinction between the "indeterminate position" and various cost-benefit criteria will help organize the discussion of CBA's use and will also prove important to the theoretical analysis of CBA's neutrality in Part Three.

B. CBA's Use in Modern Environmental, Health, and Safety Law

Most modern environmental, health, and safety statutes aim to protect public health and the environment.³¹ Many of these statutes seek to accomplish this through a combination of health-based (or, more broadly, effects-based) standards and technology-based standards.³² Health-based standard setting provisions require regulators to set pollution levels that protect public health or the environment.³³ Technology-based regulations require regulators to match pollution levels to the capabilities of technologies that can reduce pollution.³⁴ A few of the health-based standard-setting provisions forbid consideration of cost, and the others relegate cost to a distinctly subsidiary role.³⁵ The technology-based provisions require the consideration of cost, but do not contemplate balancing costs against monetized benefits. Instead, government

L. REV. 1489, 1498 (2002) (noting that CBA is a tool and a procedure not a rigid formula to determine outcomes).

29. See *Chemical Mfrs. Ass'n v. EPA*, 870 F.2d 177, 204 (5th Cir. 1989) (explaining that the requirement that an agency consider costs and benefits did not yield any particular test); Driesen, *supra* note 5, at 48.

30. Cf. Hahn & Sunstein, *supra* note 28, at 1498 (arguing for a presumption against regulation with costs exceeding benefits).

31. See, e.g., 16 U.S.C. § 1531(b) (2000); 33 U.S.C. § 1251(a) (2000); 42 U.S.C. § 6902(a) (2000); 42 U.S.C. § 7401(b)(1) (2000).

32. See, e.g., Buzbee, *supra* note 13, at 327 (noting that most statutes require examination of technological capabilities, health impacts, or some combination of the two). See also *Whitman v. American Trucking Ass'ns*, 531 U.S. 457, 464–71 (2001) (finding that EPA must establish national ambient air quality standards to protect public health); *Alaska Dep't of Env'tl. Conservation v. EPA*, 540 U.S. 461, 489 n.13 (2004) (describing a requirement that polluters employ the technology that "best reduces pollution within practical constraints").

33. See, e.g., *Whitman*, 531 U.S. at 464–71 (discussing the health-based provision governing ambient air quality standards).

34. See, e.g., *Alaska Dep't of Env'tl. Conservation*, 540 U.S. at 489 n.13.

35. See, e.g., *Whitman*, 531 U.S. at 464–71 (EPA may not consider cost in setting national ambient air quality standards to protect public health); *Natural Res. Def. Council, Inc. v. EPA*, 824 F.2d 1146, 1164–65 (D.C. Cir. 1987) (en banc) (EPA may not consider cost in protecting health, but may consider it in providing an "ample margin" of safety from hazardous air pollution).

agencies sometimes examine costs to determine whether achievement of a proposed standard is feasible, a process that only requires the comparison of costs to the economic capabilities of facilities.³⁶ Alternatively (or as a supplement), agencies implementing some technology-based provisions may engage in a rough form of balancing that does not involve CBA, because it does not involve quantitative risk assessment or monetization.³⁷ This balancing relies upon marginal cost-effectiveness analysis.³⁸ For an environmental regulation, the regulator estimates the quantity of emission reductions available at a particular cost, generating cost per ton of reduction estimates for various regulatory options.³⁹ This analysis helps the regulator to avoid extraordinarily costly requirements and to create rules of thumb allowing for equitable treatment of the many pollution sources contributing to an environmental problem.⁴⁰ But it avoids the complications inherent in quantifying and monetizing environmental and health effects.⁴¹ Technology-based standard-setting provisions require consideration of cost, but do not impose a cost-benefit criterion or require CBA because they do not contemplate quantifying

36. See, e.g., *Alaska Dep't of Envtl. Conservation*, 540 U.S. at 496–501; *Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 564 (D.C. Cir. 2002) (plant closures predicted when net earnings fall below the salvage value of a regulated mill); *Kennecott v. EPA*, 780 F.2d 445, 456 (4th Cir. 1985); *United Steelworkers of Am. v. Marshall*, 647 F.2d 1189, 1265 (D.C. Cir. 1980) (no matter how “initially frightening” the projected costs, a court must examine those costs in “relation to the financial health and profitability of the industry”); *Am. Iron & Steel Inst. v. OSHA*, 577 F.2d 825, 836–37 (3rd Cir. 1978) (affirming the feasibility of a regulation imposing total costs of around \$240 million, because industry was profitable with producers earning more than \$857 million a year); *CPC Int'l, Inc. v. Train*, 540 F.2d 1329, 1341 (8th Cir. 1976) (CBA not required for technology-based decisions under the Clean Water Act); *Nat'l Renderers Ass'n v. EPA*, 541 F.2d 1281, 1289 (8th Cir. 1976) (EPA erred in failing to compare costs to income to measure economic viability).

37. See SIDNEY A. SHAPIRO & ROBERT L. GLICKSMAN, *RISK REGULATION AT RISK: RESTORING A PRAGMATIC APPROACH* 37–39 (2003).

38. See, e.g., Richard B. Stewart, *A New Generation of Environmental Regulation?*, 29 CAP. U. L. REV. 21, 41 (2001) (contrasting cost-effectiveness analysis with CBA); Robert W. Hahn et al., *Assessing Regulatory Impact Analyses: The Failure of Agencies to Comply with Executive Order 12,866*, 23 HARV. J.L. & PUB. POL'Y 859, 872–74 (2000) (cost-effectiveness analysis does not involve monetization of benefits); Fred Anderson et al., *Regulatory Improvement Legislation: Risk Assessment, Cost-Benefit Analysis, and Judicial Review*, 11 DUKE ENVTL. L. & POL'Y F. 89, 93 (2000) (cost-effectiveness analysis is used instead of cost-benefit analysis for many applications in public health and medicine).

39. See, e.g., *Husqvarna AB v. EPA*, 254 F.3d 195, 200 (D.C. Cir. 2001) (EPA employed incremental cost-effectiveness analysis in setting standards for marine engines); *Chemical Mfrs. Ass'n v. EPA*, 870 F.2d 177, 204–07 (5th Cir. 1989) (concluding that avoidance of the knee in the curve is not required).

40. See MCGARITY, *supra* note 1, at 32 (explaining that EPA felt that it was “in the right ballpark” in imposing costs of \$11,654 per ton of lead removal on small refineries, because its standard for lead acid battery plants imposed \$13,900 per ton removal costs for medium plants and \$5,080 per ton for large plants).

41. See Driesen, *supra* note 5, at 3.

benefits to compare them to costs.⁴² This distinction between marginal cost-effectiveness analysis and CBA will prove important to the analysis of the history of CBA's use.⁴³

The courts, however, have interpreted key statutory provisions in the Toxic Substances Control Act (TSCA)⁴⁴ and the Federal Insecticide Fungicide and Rodenticide Act (FIFRA)⁴⁵ as mandating the application of cost-benefit tests to government regulation.⁴⁶ Congress recently added a hybrid test that includes a limited cost-benefit criterion to a third statute, the Safe Drinking Water Act (SDWA).⁴⁷ The history of the implementation of TSCA and FIFRA, both of which make cost-benefit tests central to agency decisions about how to regulate chemical substances, provides an understanding of experience with cost-benefit criteria.

Agencies frequently conduct CBA even under statutes that impose no cost-benefit criteria. President Reagan introduced this practice through promulgation of an Executive Order requiring CBA "to the extent permitted by law" and requiring the Office of Management and

42. See *Ass'n of Pac. Fisheries v. EPA*, 615 F.2d 794, 805 (9th Cir. 1980).

43. Cf. Anderson et al., *supra* note 38, at 93 (sometimes analysts use the term "cost-benefit analysis" broadly to include both cost-benefit analysis itself and cost-effectiveness analysis). I distinguish between CBA and cost-effectiveness analysis, because many opponents of CBA, defined as a procedure that seeks to monetize benefits, do not oppose cost-effectiveness analysis. Also, marginal cost-effectiveness analysis is not the same as cost-effectiveness analysis. Marginal cost-effectiveness analysis can aid in choosing among various goals (stringency levels) because it provides a ratio of costs to incremental reductions in pollution. Cost-effectiveness analysis evaluates the costs of different means of achieving a pre-determined goal. See Eric A. Posner, *Transfer Regulations and Cost-Effectiveness Analysis*, 53 DUKE L.J. 1067, 1069 (2003) (cost-effectiveness analysis compares different means of achieving the same regulatory end).

44. 15 U.S.C. §§ 2601–2692 (2000).

45. 7 U.S.C. §§ 136(a)–136(y) (2000).

46. See *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 532 (9th Cir. 2001); *Save Our Ecosystems v. Clark*, 747 F.2d 1240, 1248 (9th Cir. 1984); *Env'tl. Def. Fund, Inc. v. EPA*, 548 F.2d 998, 1012–18 (D.C. Cir. 1976) (proponent of a pesticide must show that its benefits outweigh its risks); McGarity, *supra* note 27, at 2343 (identifying cost-benefit balancing as the "core regulatory concept" of TSCA and FIFRA); Thomas O. McGarity, *The Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld*, 75 TEX. L. REV. 525, 541–49 (1997) (critiquing the interpretation of TSCA as imposing a cost-benefit test). Congress, however, amended FIFRA in 1996 to modify the cost-benefit balancing approach for pesticides used in food. See Food Quality Protection Act of 1996, Pub. L. No. 104-170, 110 Stat. 1489.

47. Safe Drinking Water Act Amendments of 1996, Pub. L. No. 104-182, 110 Stat. 1613 (codified as amended at 42 U.S.C. §§ 300f–300j-25 (Supp. V 1999)). See McGarity, *supra* note 27, at 2343–44 (analyzing the cost-benefit and risk-risk balancing of amendments); Jason Scott Johnston, *A Game Theoretic Analysis of Alternative Institutions for Regulatory Cost-Benefit Analysis*, 150 U. PA. L. REV. 1343, 1393 (2002) (explaining the Safe Drinking Water Act's hybrid test).

Budget (OMB) to review agency actions under the order.⁴⁸ This order formed part of the Reagan Administration's active deregulatory program.⁴⁹ The Executive Order's avowed purpose was decidedly non-neutral: it sought to "reduce the burdens of existing and future regulations."⁵⁰ Unfortunately, almost all changes reducing regulatory "burdens" also reduce safety, protection of public health, and/or protection of the environment.⁵¹ Nevertheless, subsequent presidents, including President Clinton, have continued this program, issuing a series of Executive Orders that required agencies to quantify "benefits" and compare them to costs whenever possible and legally permissible. The Unfunded Mandates Reform Act of 1995 codified these requirements to some extent.⁵²

OMB, which mostly employs economists, oversees implementation of the Executive Order.⁵³ The Executive Order requires the agencies to "assess both the costs and benefits of . . . regulation."⁵⁴ As a result, the administrative agencies, not OMB, carry out CBA. When quantification of benefits proves impossible, agencies submit a regulatory impact analysis that may focus instead on marginal cost-effectiveness analysis.

48. Exec. Order No. 12,291, 3 C.F.R. 127, 1288 (1980–1982), *reprinted in* 5 U.S.C. § 601 (2000).

49. See Alan B. Morrison, *OMB Interference with Agency Rulemaking: The Wrong Way to Write a Regulation*, 99 HARV. L. REV. 1059, 1062 (1986) (characterizing Reagan's Executive Order as part of a program by the "Presidential Task Force on Regulatory Relief" to make sure that regulation is only promulgated, if at all, as a last resort).

50. Exec. Order No. 12,291, *supra* note 48, at 127. The preamble also announces some more neutral purposes, namely increasing agency accountability, providing Presidential oversight, minimizing conflict and duplication, and ensuring well-reasoned regulation. *Id.* Nevertheless, the existence of a goal of reducing burdens with no goal of increasing benefits suggests a lack of neutrality. See Robert V. Percival, *Rediscovering the Limits of Regulatory Review Authority of the Office of Management and Budget*, 17 ENVTL L. RPTR. 10017, 10018 (1987) (an anti-regulatory philosophy inspired the Reagan Executive Orders, rather than a "concern for improving the . . . regulatory process.")

51. Most changes reducing regulatory burdens reduce the stringency of regulation, narrow its scope, or delay its implementation, and therefore allow more pollution than might otherwise be allowed. For example, the EPA, in response to CBA, reduced the number of products subject to an asbestos ban, a reduction in scope. See ECONOMIC ANALYSES AT EPA 458 (Richard D. Morgenstern ed., 1997). Sometimes, however, an agency will introduce an emissions trading or averaging program. If the program is well designed, the same benefits can be realized at lower costs.

52. Pub. L. No. 104-4, § 202(a), 109 Stat. 64 (codified at 2 U.S.C. § 1532).

53. See U.S. GEN. ACCOUNTING OFFICE, RULEMAKING: OMB'S ROLE IN REVIEWS OF AGENCIES' DRAFT RULES AND THE TRANSPARENCY OF THOSE REVIEWS 3, 17–21 (2003) [hereinafter GAO 2003] (describing OMB's review role in detail); Office of Management and Budget, Draft Report to Congress on the Costs and Benefits of Regulation, 67 Fed. Reg. 15,014, 15,021–22 (Mar. 28, 2002) (juxtaposing a few recent science hires with "OIRA's historical staffing strengths in economics, policy analysis, statistics and law").

54. Exec. Order No. 12,866, 3 C.F.R. 639 (1993), *reprinted in* 5 U.S.C. § 601 (2000).

The agency typically also submits a draft regulation, which often includes regulatory language, a rationale for the agency's proposal, alternatives to the proposal, and requests for comments. The Executive Order authorizes wide-ranging review of agency rulemaking packages, describing OMB's review function as ensuring that "regulations are consistent with applicable law, the President's priorities," the Executive Order's principles, and other agencies' policies.⁵⁵

The tension between the economic efficiency ideals animating the Executive Orders and the Unfunded Mandates Reform Act on the one hand, and the health and environmental protection goals of the statutes not calling for CBA on the other, has produced a history of negotiation between OMB and regulatory agencies about the content of regulations.⁵⁶ Experience under the Executive Orders outside the FIFRA and TSCA context offers an understanding of the history of the indeterminate position's application.⁵⁷

Thus, we have two sorts of history to examine. The history of application of cost-benefit criteria comes primarily from TSCA and FIFRA. The history of the results of an indeterminate position comes primarily from examination of OMB supervision of agency administration of the

55. 3 C.F.R. § 640 (1993).

56. See Kathleen M. O'Connor, Comment, *OMB Involvement in FDA Regulations: Regulating the Regulators*, 38 CATH. U. L. REV. 175, 195-206 (1988) (describing in detail the protracted negotiation between OMB and the Food and Drug Administration over a rule governing investigation of new drug applications); Steven T. Kargman, Note, *OMB Intervention in Agency Rulemaking: the Case for Broadened Record Review*, 95 YALE L.J. 1789, 1791-93 (1986) (referring to two records in administrative rulemaking under the Executive Orders, one of the agency's interactions with the public and one of its interactions with OMB).

57. See Buzbee, *supra* note 13, at 329-42 (explaining how combining CBA with existing statutory criterion leads to an indeterminate "muddle"). One might object to this conclusion on the grounds that the Executive Orders contain some criteria to govern regulation. But these criteria may only govern, under the Executive Orders' terms, to the extent permissible by law. See Exec. Order No. 12,291, *supra* note 48, at 128, 131-32; Exec. Order No. 12,498, 3 C.F.R. 323, 325 (1985), reprinted in 5 U.S.C. § 601 (2000). This invites a debate about whether the existing law permits these criteria to govern or makes them irrelevant. In practice, the juxtaposition of conflicting criteria often leads to ad hoc negotiation between OMB and implementing agencies. Certainly, conflicting criteria can make the governing law "indeterminate." Cf. Peter L. Strauss, *Presidential Rulemaking*, 72 CHI.-KENT L. REV. 965, 967-68 (1997) (suggesting that OMB review gives the executive branch a law-making role in tension with Congressional legislative primacy).

Professor Buzbee points out that the limitations in the Executive Order made it clear that statutes would govern in case of a conflict. See Buzbee, *supra* note 13, at 316. But he also notes that OMB "sought to impose cost-benefit considerations in the context of statutory mandates not allowing such considerations." *Id.* at 316 n.59. These conclusions are consistent with two types of indeterminacy. Indeterminate results can stem from clashes between a law-abiding agency and a rogue OMB with considerable political clout. Legal indeterminacy may also come about if there is genuine doubt about whether the statute conflicts with the Executive Order.

other health, safety, and environmental statutes, such as the Clean Air Act (CAA),⁵⁸ the Federal Water Pollution Control Act (FWPCA),⁵⁹ the Resources Conservation and Recovery Act (RCRA),⁶⁰ and the Occupational Safety and Health Act (OSHA).⁶¹

1. TSCA and FIFRA Experience

Scholars who have studied TSCA and FIFRA generally agree that application of cost-benefit criteria has throttled regulation under key provisions of these two statutes.⁶² Indeed, EPA has not banned a single chemical under TSCA since the United States Court of Appeals for the Fifth Circuit interpreted the statute as requiring that bans pass a cost-benefit test.⁶³ The case cementing this interpretation, *Corrosion Proof Fittings v. EPA*,⁶⁴ rejected an EPA ban of asbestos, arrived at after more than a decade of study.⁶⁵ Asbestos produced some of the most easily understood and significant public health damage that government agencies have ever encountered. Asbestos causes a signature disease, asbestosis, which allows regulators to differentiate the impact of this substance from other environmental influences with unusual ease.⁶⁶ Asbestos destroyed the health of so many workers that damages paid out after tort suits addressing asbestos exposure bankrupted the asbestos industry.⁶⁷ Still, EPA lacked sufficient data to fully quantify asbestosis' health effects;⁶⁸ quantification would require detailed exposure data and an understanding of a dose response curve, either of which could be lacking even for a well proven health effect. The *Corrosion Proof Fittings* court refused to permit EPA to give unquantified health effects substantial

58. 42 U.S.C. §§ 7401-7671q (2000).

59. 33 U.S.C. §§ 1251-1387 (2000). I will refer to this statute by its more colloquial name, the Clean Water Act.

60. 42 U.S.C. §§ 9601-9675 (2000).

61. 29 U.S.C. §§ 651-678 (2000).

62. See McGarity, *supra* note 27, at 2343 (the process of CBA has "thoroughly stymied government action under" TSCA and FIFRA); Johnston, *supra* note 47, at 1392 (EPA had only re-registered 2 of 19,000 older pesticides by 1992); Donald T. Hornstein, *Lessons from Federal Pesticide Regulation on the Paradigms and Politics of Environmental Law Reform*, 10 YALE J. ON REG. 369, 436-37 & n.395 (1993).

63. See *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201, 1222 (5th Cir. 1991) (interpreting the Toxic Substances Control Act as requiring a cost-benefit approach to limiting toxic substances).

64. *Corrosion Proof Fittings*, 947 F.2d 1201.

65. Driesen, *supra* note 15, at 602-03.

66. *Id.* at 603.

67. *Id.* at 596.

68. *Id.* at 597 n.226.

weight.⁶⁹ The court also took issue with some of the controversial judgments EPA had to make to quantify costs and benefits.⁷⁰ So, EPA was unable to effectively regulate asbestos under TSCA, and gave up any serious effort to regulate any substance under section 6 of TSCA after its traumatic experience with CBA of asbestos.⁷¹ FIFRA has a similar history of a cost-benefit test producing paralysis in addressing environmental and health threats, partly because that test made it possible for industry to ward off regulation by avoiding production of data (and occasionally falsifying data) needed for risk assessment.⁷² No one disputes the view that the cost-benefit criterion under these statutory provisions has largely stymied regulation.⁷³

2. OMB Review Under Other Statutes

OMB review seeks to advance CBA's cause even when the statute itself does not employ a cost-benefit test. Commentators agree that OMB often subjects major rules imposing fresh regulation upon industry to intensive review leading agencies to weaken the regulations.⁷⁴ They also agree that OMB often does not intensively review deregulatory

69. *Corrosion Proof Fittings*, 947 F.2d at 1219 ("Unquantified benefits . . . cannot . . . be used to effect a wholesale shift in the balance beam.").

70. *Id.* at 1218-19 (taking issue with EPA's approach to discounting, its decision to limit the time period for quantifying benefits, and its "reliance upon . . . population exposure").

71. ECONOMIC ANALYSES AT EPA, *supra* note 51, at 199 (noting that EPA never regulated anything but PCB's under section 6 after the reversal of the asbestos rule). EPA had banned PCB's long before.

72. See Johnston, *supra* note 47, at 1392 (EPA had reregistered only 2 of 19,000 older pesticides by 1992, because of intense industry pressure); Hornstein, *supra* note 62, at 436-37 & n.395.

73. Some economists have studied the influences upon the decisions made about 19 pesticides under the cost-benefit regime. See Maureen L. Cropper et al., *The Determinants of Pesticide Regulation: A Statistical Analysis of EPA Decision Making*, in THE POLITICAL ECONOMY OF ENVIRONMENTAL PROTECTION: ANALYSIS AND EVIDENCE (Roger D. Congleton ed., 1996). They concluded that the agency's assessment of costs and benefits did influence its decisions about whether to cancel pesticides. *Id.* at 134. They also concluded that political factors, such as the participation in decisions by growers and environmentalists, and the disposition of the EPA chief influence results. *Id.* at 138. This study, however, does not compare the CBA regime to an alternative to measure whether CBA is neutral.

74. See, e.g., Morgenstern, *supra* note 51, at 458 (citing examples of "improvements leading to decreased costs" consisting largely of reductions of the stringency of rules); Claudia O'Brien, *White House Review of Regulations Under the Clean Air Act Amendments of 1990*, 8 J. ENVTL. L. & LITIG. 51, 72-101 (1993) (presenting case studies); Erik D. Olson, *The Quiet Shift of Power: Office of Management & Budget Supervision of Environmental Protection Agency Rulemaking Under Executive Order 12,291*, 4 VA. J. NAT. RESOURCES L. 1, 64-72 (1984) (discussing examples).

measures.⁷⁵ For example, OMB engaged in protracted argument with EPA in the early 1980s over whether EPA must prepare a CBA of a possible tightening of the particulate matter National Ambient Air Quality Standard (NAAQS), but it cleared EPA revocation of the hydrocarbon NAAQS in two days with no formal CBA.⁷⁶ Similarly, OMB cleared relaxation and suspension of noise reduction requirements in two days.⁷⁷ More recently, OMB declined to demand that EPA employ CBA to analyze relaxation of new source review requirements.⁷⁸ This failure to demand CBA of major measures weakening protection of health, safety, and the environment strongly suggests that the review functions as a check on stringency, not as a means of objectively assessing the merits of regulation.⁷⁹

Both OMB's critics and its supporters agree that OMB does not formally change all rules that it reviews. Its own published statistics indicate that it frequently approves rules without major change.⁸⁰ But the data indicate that in reviewing EPA rules, OMB often significantly

75. See Olson, *supra* note 74, at 54 (1984) (citing a statement by a former OIRA administrator admitting that OMB waives review for any rule reducing compliance cost); GEORGE C. EADS & MICHAEL FIX, RELIEF OR REFORM? REAGAN'S REGULATORY DILEMMA 123 (1984) (an agency declaration that a rule aimed to reduce the costs of regulation often resulted in an exemption from OMB review under the Reagan Executive Order).

76. Olson, *supra* note 74, at 54.

77. See *id.* at 54-55.

78. See OMB 2004, *supra* note 17, at 108 (citing new source review changes as examples of "regulatory reform accomplishments"); GEN. ACCOUNTING OFFICE, EPA SHOULD USE AVAILABLE DATA TO MONITOR THE EFFECTS OF ITS REVISIONS TO ITS NEW SOURCE REVIEW PROGRAM 4 (2003) (EPA's decision to relax new source review rules relied primarily upon anecdotal information from industry).

79. See Richard N. L. Andrews, *Economics and Environmental Decisions, Past and Present*, in ENVIRONMENTAL POLICY UNDER PRESIDENT REAGAN'S EXECUTIVE ORDER 43, 79 (V. Kerry Smith ed., 1984) [hereinafter ENVIRONMENTAL POLICY] (citing the failure to subject deregulatory decisions to CBA as indicative of a bias in favor of deregulation).

80. See Steven Croley, *White House Review of Agency Rulemaking: An Empirical Investigation*, 70 U. CHI. L. REV. 821, 847-52 (2003) (discussing the percentages of rules changed during the Clinton and Bush Administrations); GAO 2003, *supra* note 53, at 9 (concluding that OIRA review only had a significant effect on 25 of 85 draft rules during a short period of the Bush Administration); GEN. ACCOUNTING OFFICE, REGULATORY REFORM: IMPLEMENTATION OF THE REGULATORY REVIEW EXECUTIVE ORDER 8 (1996) [hereinafter GAO 1996] (finding that the number of rules that were changed significantly during OIRA review "increased substantially between 1981 and 1996"); James R. Bowers, *Establishing the Constitutional Legitimacy of OMB's Regulatory Review: A Shared Powers Perspective*, 25 NEW ENG. L. REV. 397, 411 (1990) (discussing the decline in percentage of rules OMB found consistent with Executive Order 12,291 between 1981 and 1987 to about 77%); Christopher C. DeMuth, & Douglas H. Ginsburg, *White House Review of Agency Rulemaking*, 99 HARV. L. REV. 1075, 1088 (1986) (80% of rules approved without change); Olson, *supra* note 74, at 41 (noting that 86% of rules cleared OMB without change as of 1982).

changes between 45 and 75 percent of the rules it reviews.⁸¹ This may help explain why environmental scholars view OMB influence as pervasive, while scholars looking at general statistics may view it as much more benign.⁸²

For the government as a whole, the number of rules that the OMB influences might be small in percentage terms, but the absolute number of rules that it influences through the formal regulatory review process number in the thousands by this time.⁸³ While OMB's supporters tend to emphasize the high percentage of rules that OMB says it has not changed through formal review (which often hovers around eighty percent), its critics tend to emphasize the large absolute number of rules that OMB influences. This difference in emphasis should not obscure the agreement that both the percentage of formally unaffected rules is high (at least outside the environmental realm) and that the absolute number and significance of rules changed through OMB review is also high (especially in the environmental realm).

Also, the General Accounting Office ("GAO") and scholars who have studied OMB review have reported that OMB may influence rules that it does not significantly change in the formal regulatory review process.⁸⁴ OMB often influences rules informally before undertaking review of a completed draft regulation.⁸⁵ And agency employees have reported that they avoid even considering requirements that OMB would

81. See GAO 2003, *supra* note 53, at 82 (chart shows that OMB significantly changed 45% of the EPA rules it reviewed during a one year period in 2002); GAO 1996, *supra* note 80, at 11–12 (while 55% of all rules submitted in 1994 were changed while at OIRA, 74% of EPA rules were changed); GEN. ACCOUNTING OFFICE, REGULATORY REVIEW: INFORMATION ON OMB'S REVIEW PROCESS 13 (1989) (from 1981–1989 OMB found 75% of government rules consistent with the Executive Order "without change" but only 52% of the EPA rules).

82. See, e.g., Croley, *supra* note 80, at 873 (suggesting that the statistics suggest that OMB review might be "benign"); Olson, *supra* note 74, at 41–55 (claiming that OMB review significantly delays and weakens regulation).

83. See Bowers, *supra* note 80, at 411 (on average, 537 rules per year between 1981–1987 were modified in response to OMB review). Steven Croley reports that the White House (meaning OMB) reviewed 34,386 rules from 1981–2000. Croley, *supra* note 80, at 846. He reports that on average, half of the rules reviewed between 1993 and 2000 were changed and 25% were changed from 1981 to October of 1993. *Id.* at 849. Since 25% of the 34,386 rules is more than 8,500 rules, his figures show that thousands of rules were changed by OIRA review. Croley correctly notes that the data coding is such that we cannot be sure that all of these changes are significant. *Id.* at 849 n.70. He does not mention the reports of informal OMB influence over rules not captured by the statistics he reviews.

84. GAO 2003, *supra* note 53, at 130 (some types of OMB influence are not reflected in the available documentation); Olson, *supra* note 74, at 41 (it is likely that OMB still had some informal impact upon the substance of rules that it approved unchanged).

85. GAO 2003, *supra* note 53, at 7–8 (OIRA says that informal review prior to submission has been increasing and can have a substantial effect on the substance of rules).

likely disapprove.⁸⁶ Thus, OMB's influence almost surely is more extensive than the statistics would indicate, but hard data about the precise scope and nature of this informal influence is difficult to produce.

II. CBA'S EFFECT

In spite of agreement on some points, CBA has recently generated some apparently conflicting claims by legal scholars about the nature of CBA's impact upon the many rules that it significantly influences. Many analysts claim that OMB review consistently favors less stringent regulation when it takes any position at all, and that its review delays and weakens regulation.⁸⁷ Yet, Cass Sunstein cites several cases in which he claims CBA has helped make environmental regulation more stringent or more extensive.⁸⁸ He relies exclusively upon case studies assembled by Richard Morgenstern, a former EPA economist, that include cases where EPA used economic analysis to strengthen regulation, and upon OMB's use of "prompt" letters, which Sunstein characterizes as examples of CBA spurring more extensive regulation.⁸⁹

This section first examines the traditional view of the nature of OMB review as anti-environmental. Then it will examine Sunstein's anecdotal information from the Morgenstern-edited case studies. Finally, this section will update this earlier research based on experience under George W. Bush. This last empirical analysis includes consideration of the prompt letters relied upon by Sunstein in suggesting that CBA sometimes spurs new regulation.

86. See *id.* at 130.

87. ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 694 (2d ed. 1996); Mark Seidenfeld, *A Big Picture Approach to Presidential Influence on Agency Policy-Making*, 80 IOWA L. REV. 1, 17 & n.99 (1994) (concluding that the Reagan and first Bush Administrations adopted an "unstated goal" of "deregulation"); O'Brien, *supra* note 74, at 60 (in the Bush Administration, cost-benefit tests were used to allow opponents of regulation to oppose them "under the guise of objectivity"); Percival, *supra* note 50, at 10,018 (claiming that an anti-regulatory philosophy undergirded the Reagan Executive Order); Olson, *supra* note 74, at 55; Bowers, *supra* note 80, at 411 (OMB exercises a veto over regulation). See also Caroline DeWitt, Comment, *The President's Council on Competitiveness: Undermining the Administrative Procedure Act with Regulatory Review*, 6 ADMIN. L.J. AM. U. 759, 762-63 (1993) (the Council on Competitiveness has persuaded agencies to weaken or eliminate regulations relating to commercial aircraft noise, wetlands protection, and air pollution); MCGARITY, *supra* note 1, at 286-87 (OMB has sought less stringent regulations in hundreds of cases, but urged more stringent regulation in "at most a handful of cases").

88. See SUNSTEIN, RISK & REASON, *supra* note 3, at 26-27.

89. See *id.* at nn.34-36.

A. The Thesis that OMB Almost Always Favors Reduction in Stringency

Until relatively recently, the literature unanimously agreed that OMB had consistently weakened, rather than strengthened environmental, health, and safety standards.⁹⁰ OMB review involves hundreds of cases of OMB vetoing regulations.⁹¹ Much more frequently, however, the implicit threat of OMB veto or opposition to EPA budget requests has induced EPA to beef up CBA and weaken regulation.⁹² OMB requests or suggestions that rules should be made less stringent have often lengthened OMB review and led to protracted negotiation about how much laxer to make them.⁹³ This debate in itself delayed regulation and therefore subjected beneficiaries to additional harms, while benefiting industry by reducing its compliance costs.⁹⁴ Often, agencies weakened

90. See, e.g., Olson, *supra* note 74, at 55 ("Research has not uncovered a single instance of OMB's insistence that EPA maximize net benefits by increasing health or environmental protection."). Cf. Richard D. Morgenstern, *Introduction to Economic Analyses at EPA*, in *ECONOMIC ANALYSES AT EPA*, *supra* note 51, at 2-3 (suggesting, in 1997, that economic analysis has made some regulation more stringent); SUNSTEIN, *RISK & REASON*, *supra* note 3, at 26-27 (claiming, in 2002, that CBA makes regulation more stringent at times).

91. See MCGARITY, *supra* note 1, at 22 (during the Reagan years roughly eighty-five rules per year were either returned to agencies for reconsideration or withdrawn by agencies during OMB review); Bowers, *supra* note 80, at 412 (on average, OMB vetoed thirty-eight rules per year between 1981-1987, and the agency withdrew an additional fifty-two per year); Olson, *supra* note 74, at 41-42, 44 (OMB vetoed 101 regulations through the end of 1982, including 31 EPA rules). OMB refers to these vetoes as "returns" of agency action. *Id.* at 41-42. But since some scholars have found that returned rules were never promulgated, these commentators treat OMB "returns" as vetoes. *Id.* at 41-44. See also Bowers, *supra* note 80, at 410 (arguing that the Executive Order's prohibition of proposals in the *Federal Register* during OMB review and of promulgation of final rules before responding to OMB review effectively creates a veto). My review of recent Bush Administration regulatory review, however, has uncovered a case where an agency subsequently promulgated a safety rule supported by industry after it was "vetoed" through a return letter. See Letter from John D. Graham, OIRA Adm'r, to Rosalind A. Knapp, Deputy Gen. Counsel, Dep't of Transp. (Aug. 8, 2001), available at http://www.whitehouse.gov/omb/inforeg/faa_light_sport_aircraft_rtltr-dot.html (rejecting proposal to regulate sport aircraft); Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 69 Fed. Reg. 44,772 (July 27, 2004) (codified at 14 C.F.R. pts. 1, 21, 43, 45, 61, 65, & 91 (2005)).

92. See Olson, *supra* note 74, at 45-48. See also Bowers, *supra* note 80, at 411 (on average, 537 rules per year between 1981-87 were modified in response to OMB review).

93. See Olson, *supra* note 74, at 48-49 (discussing delays stemming from interagency disputes between OMB and EPA).

94. See McGarity, *supra* note 21, at 26 (delay can have enormous practical consequences for regulation's beneficiaries); Morrison, *supra* note 49, at 1064-65 (delay paid for through decreased health and safety); Percival, *supra* note 50, at 10,019-20 (discovery revealed that OMB has not honored provisions in Executive Order requiring that regulatory review respect statutory deadlines for promulgating rules). See, e.g., William J. Nicholson & Philip J. Landrigan, *Quantitative Assessment of Lives Lost Due to Delay in the Regulation of Occupational*

their proposed rules or abandoned them altogether in order to satisfy OMB, sometimes in response to specific OMB suggestions and sometimes in anticipation of potential problems with OMB review.⁹⁵

Even if one assumed that OMB exercised no informal anti-environmental influence beyond its formal review process, the traditional view of OMB review as non-neutral would not conflict with the observation that formal OMB review often leaves rules unchanged.⁹⁶ If OMB review, for example, made some important regulations less stringent, left others delayed but unaltered, and never made any regulation more stringent, its influence would be clearly negative from the standpoint of environmental and health protection and clearly positive from the standpoint of industry. I will therefore frame the general issue about CBA's neutrality in the following terms: on the occasions when government officials relying on a cost-benefit framework have sought to encourage significant changes in a rule based on CBA, have they generally favored laxer or less extensive regulation, or have they often favored more stringent or extensive regulation? Until Sunstein's book, there seemed little

Exposure to Benzene, 82 ENVTL. HEALTH PERSPECTIVES 185 (1989) (suggesting that delay in promulgating OSHA's benzene standard produced 30–490 additional leukemia deaths).

95. See GAO 1996, *supra* note 80, at 10 (Department of Transportation "officials said that they will not even propose certain regulatory provisions because they know that OIRA will not find them acceptable"); Bowers, *supra* note 80, at 412 (on average, agencies withdrew fifty-two rules per year between 1981–1987); W. Norton Grubb, Dale Whittington & Michael Humphries, *The Ambiguities of Benefit-Cost Analysis: An Evaluation of Regulatory Impact Analyses Under Executive Order 12,291*, in ENVIRONMENTAL POLICY, *supra* note 79, at 134–35 (discussing reports that the prospect of preparing a regulatory impact analysis for OMB review has discouraged them from proposing new regulations); Kargman, *supra* note 56, at 1791–92 (giving examples of rules vetoed, withdrawn, or substantially delayed). Professor McGarity provides an interesting overview of the types of changes typically sought by OMB at various agencies. OMB objected to agency rules that valued life too highly. MCGARITY, *supra* note 1, at 275. In the 1980s, OMB insisted on discount rates of 10% for environmental benefits, while agencies wanted to use lower discount rates. *Id.* OMB fought for less health protective models to extrapolate estimates of cancer risk from limited data. *Id.* at 275–77. OMB argued for less expensive cut-off points for technology-based regulations, which would lead to less stringent standards. *Id.* at 277. OMB sought to make EPA's risk cutoff for regulating carcinogens less stringent, seeking acceptance of a 1 in 100,000 risk of contracting cancer. *Id.* at 278. OMB opposed worst-case estimates of risk, thereby making standards less protective. *Id.* What is so striking about these cases cumulatively, drawn from a rich array of data, is that OMB has so uniformly favored approaches that tend to reduce the protectiveness of standards.

96. See Olson, *supra* note 74, at 41–42 (two percent of the rules OMB reviewed through 1982 were effectively vetoed, but not changed, and agencies withdrew eighty-one rules in this period, sometimes in response to signals from OMB).

question about the answer to that question: a CBA framework almost always led to laxer or less extensive regulation.⁹⁷

B. Neutral CBA?: An Analysis of Some Anecdotal Information

Richard Morgenstern, a former EPA economist, edited a book consisting of twelve case studies of the use of "economic analysis" at EPA. His summary of the case studies claims that the analysis had contributed to cost savings in all twelve regulations and to greater environmental benefits in five regulations.⁹⁸ The case studies themselves show that many of the cost-saving changes involved relaxing the stringency or reducing the scope of regulation.⁹⁹ The case studies associate economic analysis with increased regulatory benefits in the regulation of the Navajo Generating Station to improve visibility in the Grand Canyon, pollution from organic chemical factories, the reformulation of gasoline to reduce air emissions, lead in drinking water, and lead levels in gasoline made by small refiners.¹⁰⁰ These studies focus on EPA's own use of economic analysis, rather than OMB regulatory review.

Proponents of CBA in the legal academy, such as Cass Sunstein, have relied on Morgenstern's anecdotal information to argue that "Cost and Benefits" are "for Everyone."¹⁰¹ Professor Sunstein cites four of the five cases involving increased benefits as examples of CBA contributing to more stringent regulation.¹⁰² Sunstein then portrays CBA as even-handedly helping to prevent the government from "imposing high costs for little good," while encouraging "regulations that will actually do

97. See, e.g., O'Brien, *supra* note 15, at 60 (CBA provided "an effective tool for opponents of stringent environmental or health standards to challenge" them "under the guise of objectivity").

98. Richard D. Morgenstern & Marc K. Landy, *Economic Analysis: Benefits, Costs, Implications*, in *ECONOMIC ANALYSES AT EPA*, *supra* note 51, at 458. Morgenstern and Landy list "rule improvements" associated with "economic analysis." In all twelve of the rules Morgenstern's book studies, CBA led to reduced cost. *Id.* Of course, the primary method for reducing cost involves making rules laxer or delaying their implementation, thereby allowing harms to increase. And that is clearly what is happening in at least ten of the twelve rules. Morgenstern only claims "rule improvements" increasing benefits in five of the twelve rules analyzed. *Id.*

99. For example, EPA reduced the number of products subject to an asbestos ban, scaled back numerical criteria protecting the Great Lakes, reduced the frequency of vehicle inspections checking deterioration of emission controls, created some exemptions to regulations of municipal landfills, scaled back requirements for control of water pollution from chemical plants, and reduced the stringency of numerical criteria for handling sludge. *Id.*

100. *Id.*

101. See SUNSTEIN, *supra* note 2, at 137.

102. SUNSTEIN, *RISK AND REASON*, *supra* note 3, at 26-27 nn.34-36.

some good.”¹⁰³ These case studies, as we shall see, cannot support the view that CBA is even close to even-handed.

Even if all five cases involved CBA producing stricter regulation, that information would not support broad conclusions about the regulatory system as a whole. For the claim that CBA-inspired review slows and reduces the stringency of regulation rests on dozens of cases, in several careful studies focusing on the somewhat smaller domain of environmental, health, and safety regulation.¹⁰⁴ The assertion that CBA increases stringency relies upon only four cases.¹⁰⁵ If all of these cases supported the claim that CBA has made regulation more rapid or stringent, one would still be justified in concluding that CBA almost always makes it less stringent. The record would then indicate that it has made rules less stringent in dozens of cases, but made rules more stringent (or rapid) in four or five.

In fact, however, only one of these cases shows an environmentally positive influence from CBA. And the context of the one case of CBA having an environmentally positive influence, which involves reductions of lead levels in the gasoline that small refiners produce, suggests that

103. SUNSTEIN, *supra* note 2, at 137.

104. See, e.g., GEN. ACCOUNTING OFFICE, REGULATORY REFORM: IMPLEMENTATION OF THE REGULATORY REVIEW EXECUTIVE ORDER 13 (1996) (providing three examples of pro-industry regulatory changes suggested by OMB under Clinton, but not pro-environmental changes); Peter M. Shane, *Political Accountability in a System of Checks and Balances: The Case of Presidential Review of Rulemaking*, 48 ARK. L. REV. 161, 169–72 (1995) (discussing the Council on Competitiveness's support for weakening five regulations, including some where CBA was involved); O'Brien, *supra* note 74, at 72–101 (providing a detailed review of seven cases arising under the Clean Air Act in the early 1990s); Michael Herz, *Imposing Unified Executive Branch Statutory Interpretation*, 15 CARDOZO L. REV. 219, 229–49 (1993) (providing a detailed case study of OMB and Council on Competitiveness opposition to applying public comment requirements to all air pollution permit revisions); MCGARITY, *supra* note 1, at 286–87 (citing hundreds of cases where OMB has sought “less stringent” regulations); Oliver A. Houck, *President X and the New (Approved) Decisionmaking*, 36 AM. U. L. REV. 535, 540–44 (1986–87) (detailing the derailment of numerous individual regulations and two entire regulatory programs); STAFF OF THE HOUSE SUBCOMM. ON OVERSIGHT & INVESTIGATIONS, 99TH CONG., EPA'S ASBESTOS REGULATIONS: REPORT ON A CASE STUDY ON OMB INTERFERENCE IN AGENCY RULEMAKING (Comm. Print 1985) (detailing OMB efforts to thwart a ban on asbestos); Pub. Citizen Health Research Group v. Tyson, 796 F.2d 1479, 1483–84 (D.C. Cir. 1986) (OSHA withdrew a short-term exposure limit for ethylene oxide in response to OMB objections); Ctr. for Sci. in the Pub. Interest v. U.S. Dep't of the Treasury, 573 F. Supp. 1168, 1172 (D.D.C. 1983), *rev'd on other grounds*, 797 F.2d 995 (D.C. Cir. 1986) (regulation requiring disclosure of the ingredients in alcoholic beverages, partly for health reasons, rescinded after review under Exec. Order No. 12,291); Olson, *supra* note 74, at 41–42 (by the end of 1982 OMB had vetoed 101 regulations and the agencies had withdrawn eighty-one rules); *Id.* at 64–73 (providing case studies of several regulations OMB sought to weaken).

105. See Morgenstern & Landy, *supra* note 98, at 458 (claiming that in five cases economic analysis increased the benefits of regulation); SUNSTEIN, RISK & REASON, *supra* note 3, 26–27 (citing four of these same cases as evidence; also citing Morgenstern).

this case depends on prior non-CBA-based regulation and enormous economic (i.e., non-health and non-environmental) benefits.

Table 1: CBA in Dr. Morgenstern's Five Cases

Name of Rule	CBA Conducted*	CBA Motivated Stringency
Reformulated Gasoline	No	No
Organic Chemical Industry Effluent Guidelines	Yes	No
Navajo Generating Station Air Pollution	Yes	No
Lead in Drinking Water	Yes	No**
Lead in Gasoline	Yes	Yes

* I define CBA as analysis where at least some benefits have been quantified. The item marked as having no CBA used another form of economic analysis, as explained below.

** This is my own conclusion, not necessarily that of the case study author. She argues that the analysis was one of many factors that helped get the regulation through. Ronnie Levin, *Lead in Drinking Water*, in *ECONOMIC ANALYSES AT EPA*, *supra* note 51, at 228. I justify my "no" characterization below.

Neither Morgenstern nor the case study authors claim that CBA helped make all five rules more stringent. The book claims that "economic analysis" may have strengthened these rules.¹⁰⁶ It qualifies that conclusion by noting that separating out the influence of any particular form of analysis is problematic.¹⁰⁷ The term "economic analysis" includes any analysis of cost, including the forms of analysis, such as incremental cost-effectiveness analysis, that do not seek to monetize benefits. Hence, legal scholars who have read Morgenstern's book as claiming that "CBA" has led to stringent regulation, even in just four cases, have distorted his conclusions.¹⁰⁸

Professor Sunstein may have recognized that the case study of organic chemical regulation offered weak support for the assertion that economic analysis made the regulation of organic chemicals more stringent. Sunstein wisely does not cite the organic chemical rule as an ex-

106. Morgenstern & Landy, *supra* note 98, at 457-58.

107. *Id.* at 457.

108. See SUNSTEIN, *RISK & REASON*, *supra* note 3, at 26 (citing Morgenstern's examples of "economic analysis" making regulation more stringent to show that the record of "cost-benefit analysis" at EPA is "generally encouraging"); Stewart, *supra* note 38, at 45 (citing Morgenstern's case studies as examples of "cost-benefit analysis" leading to more stringent regulation).

ample of CBA making a rule more stringent but adopts the four remaining cases of benefit enhancement as evidence of CBA's neutrality.¹⁰⁹ As Morgenstern's summary shows, EPA used the CBA in this rule to relax standards for some segments of the industry.¹¹⁰ While he also lists the rule as an example of an economic analysis linked to an improvement leading to "increased benefits," the benefit he cites is "encouragement" of air emissions control.¹¹¹ At the time of this rulemaking under the Clean Water Act, the environmental community asked EPA to recognize that the waste water streams regulated also generated air pollution and suggested that EPA regulation should rely upon approaches that addressed both air quality and water quality concerns.¹¹² EPA rejected the suggestion and regulated in a way that did not address the air quality impacts, declining to require adoption of an approach—steam stripping—that would address both air and water quality simultaneously.¹¹³ Instead, EPA "recommended," but did not require, that industry address the air emissions in its choice of technology.¹¹⁴ Industry, predictably enough, did not choose the more expensive and environmentally responsible option on its own.¹¹⁵ This is simply not a case of CBA making a regulation more extensive or stringent.

The underlying case study of the reformulated gasoline rule reveals that the agency did not carry out a CBA.¹¹⁶ It did not monetize the benefits of regulation.¹¹⁷ This decision not to monetize destroys the case for CBA's influence on this regulation, because monetization of benefits distinguishes CBA from other forms of economic analysis. EPA engaged in marginal cost-effectiveness analysis where it analyzed the cost per unit

109. See SUNSTEIN, RISK & REASON, *supra* note 3, at 26–27.

110. See Morgenstern & Landy, *supra* note 98, at 458.

111. *Id.*

112. Discussion with Jessica Landman, then a senior attorney at the Natural Resources Defense Council in Washington, D.C., in the early 1990s.

113. See Organic Chemicals and Plastics and Synthetic Fibers Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards, 52 Fed. Reg. 42,522, 42,558 (Nov. 5, 1987) (codified at 40 C.F.R. pts 414, 416); *id.* at 42,547 (no PSES for volatiles); *id.* at 42,552 (plants may reduce their costs by not using steam stripping); *id.* at 42,558 (EPA considered but rejected requiring steam stripping, preferring to rely on Clean Air Act authority); *id.* at 42,560 (rationale for waiting).

114. *Id.* at 42,561.

115. *Id.* at 42,552 (plants may reduce their costs by declining to employ steam stripping).

116. See Robert C. Anderson & Richard A. Rykowski, *Reformulated Gasoline*, in ECONOMIC ANALYSES AT EPA, *supra* note 51, at 400–01, 414 (the regulatory impact analysis analyzed cost effectiveness, but did not monetize the benefits of alternatives).

117. *Id.* at 414–15 (except for the EPA's estimate of the dollars per cancer case avoided for toxic emissions, the regulatory impact analysis "did not attempt to quantify benefits"). Note that a dollar per cancer case figure does not itself monetize the benefit of avoiding a cancer case.

of reduction, a form of analysis used for many technology-based regulations both before and after the promulgation of the Executive Orders demanding quantification, in dollar terms, of a regulation's benefits.¹¹⁸ While the case study authors claim that the cost-effectiveness analysis strengthened the regulation,¹¹⁹ even that conclusion is qualified. First, the authors recognize that the statutory standard governing this rulemaking severely constrained EPA's ability to make significant discretionary decisions.¹²⁰ Congress did not simply authorize standards under some general criteria, but specifically required a fifteen percent reduction of congressionally targeted pollution in phase one and at least a twenty percent reduction in phase two.¹²¹ Accordingly, analysis of any kind would have a limited impact on this rule.¹²² Second, EPA adopted the negotiated rule as the template for the final rule, which would indicate that the parties' agreement, not regulatory analysis, produced this rule.¹²³ In any case, the reformulated gasoline case does not furnish an example of CBA, so it cannot provide an example of CBA making a rule more stringent.

The visibility case study author acknowledges that the benefits assessment performed by EPA had little impact upon the final rule, because, not surprisingly, nobody could agree about the amounts of monetized benefits in a visibility rule.¹²⁴ This lack of impact of monetization hurts the case for this rule as illustrative of CBA's positive impact, because CBA's distinctive feature involves a comparison of monetized

118. See Regulation of Fuels and Fuel Additives: Standards for Reformulated and Conventional Gasoline, 59 Fed. Reg. 7716, 7747 (Feb. 16, 1994) (codified at 40 C.F.R. pt. 80) (defining cost effectiveness as the ratio of incremental cost of control to the tons of emissions reduced).

119. See Anderson & Rykowski, *supra* note 116, at 414.

120. See *id.* at 394, 414.

121. *Id.* at 394. Congress established a default presumption of 25% but granted EPA the authority to depart from that presumption under some circumstances. 42 U.S.C. § 7545(k)(3)(B) (2000). But EPA lacked statutory authority to provide for less than a 20% reduction under any circumstances. *Id.* EPA did go beyond the statutory minimums for phase two nitrogen oxide reductions. Anderson & Rykowski, *supra* note 116, at 408.

122. See Anderson & Rykowski, *supra* note 116, at 394 (explaining that this statutory detail restricted "the alternatives available to EPA").

123. There is one fairly major exception to this. The ethanol industry used political pressure to procure favorable treatment in the reformulated gasoline rule, notwithstanding a negotiated agreement to a fuel-neutral approach. See generally Regulation of Fuels and Fuel Additives: Standards for Reformulated and Conventional Gasoline, 59 Fed. Reg. 7716, 7718-20 (Feb. 16, 1994) (to be codified at 40 C.F.R. pt. 80) (discussing adjustment in final rule addressing the ethanol industry's concerns). But CBA did not influence the Bush Administration's decision to carve out a larger role for ethanol. Cf. *id.* at 7719 (citing President Bush's announced plan for ethanol in reformulated gasoline, because of ethanol's "importance to the nation's energy and agricultural policy").

124. MORGENSTERN, *supra* note 51, at 293.

benefits to costs.¹²⁵ If the monetized benefits played little role in the outcome, then the value of CBA is called into question and a simpler alternative form of analysis might do at least as well at less cost.¹²⁶ As it happens, the authors claim that the cost analysis influenced the negotiations between the parties.¹²⁷ That cost analysis indicated that a ninety percent reduction calculated on an annual average would actually cost less than a ninety percent reduction calculated on the basis of a monthly average.¹²⁸ This paved the way for an agreement to a ninety percent reduction based on an annual average.¹²⁹ The marginal cost-effectiveness analysis described is a routine feature of technology-based decisionmaking. This case offers little support for the idea that CBA strengthens rules, but does support a more general claim that "economic analysis" contributed to a resolution of the regulatory problem before the agency.¹³⁰ We have no way of knowing how the cost-benefit ratio might have influenced the rule had it been an influential factor. The part of the analysis that helped the rule become more stringent is part of standard analysis conducted when nobody demands CBA.¹³¹ And EPA's final rule explains that the "benefits analysis forms no part of [the] legal basis for" the visibility rule.¹³²

The case study of lead in drinking water claims that CBA, not some other form of analysis, had an environmentally positive influence on the

125. ACKERMAN & HEINZERLING, *supra* note 9, at 39 (demonstrating that CBA demands reduction of costs and benefits to dollars and cents); FRANK B. CROSS, ENVIRONMENTALLY INDUCED CANCER AND THE LAW 81 (1989) (defining CBA as involving at least "some effort" to quantify both costs and benefits); Driesen, *supra* note 11, at 49 (explaining that precise scholars define CBA as analysis that quantifies both costs and benefits).

126. Cf. Scott Farrow, *Does Analysis Matter?: Economics and Planning in the Department of Interior*, 73 REV. ECON. & STAT. 172-73, 176 (1991) (concluding that a cruder analysis than CBA could have had equal influence on decisions about offshore oil and gas leasing).

127. MORGENSTERN, *supra* note 51, at 291.

128. *Id.* at 291-92.

129. *Id.* at 292.

130. EPA, in the final rulemaking notice, did state that it had "carefully . . . weighed . . . the estimated cost of compliance . . . and the visibility benefits" in concluding that the rule it adopted "is a reasonable exercise of its delegated rulemaking authority." Approval and Promulgation of Implementation Plans: Revision of the Visibility FIP for Arizona, 56 Fed. Reg. 50,172, 50,182 (Oct. 3, 1991) (to be codified at 40 C.F.R. pt. 52). But, as the rulemaking notice points out, the heart of the decision involved an unusual conclusion that a 90% reduction cost less than a less demanding percentage reduction earlier proposed. *Id.*

131. In particular, the marginal cost-effectiveness analysis indicated that achieving a larger reduction than industry initially favored would not significantly increase the cost. *Id.* The additional reduction ultimately agreed upon could be realized by optimizing the technology already needed to meet the limit industry was inclined to agree to. *Id.* This sort of consideration can influence technology-based rulemaking when nobody even thinks of attempting to monetize the benefits in reducing ecological consequences and protecting human health.

132. *Id.* at 50,184.

regulation.¹³³ But this study does not strongly support the idea that the CBA led to a more stringent regulation than EPA would have promulgated without CBA.¹³⁴ The underlying statute, the Safe Drinking Water Act, required EPA to set a maximum contaminant level goal at a level that protects health and safety.¹³⁵ EPA set this unenforceable goal at zero, because it believed that no safe threshold had been established for some of lead's health effects.¹³⁶ Hence, CBA had no influence on this part of the rulemaking.

The Act required EPA to supplement this goal with an enforceable "national primary drinking water regulation," which it must set as close to the (zero level) goal as feasible.¹³⁷ The case study claims that the CBA played an "unusually prominent role" in setting the enforceable standard, which the author describes as more stringent than EPA initially planned.¹³⁸ But the author says that this stringency stemmed from "many factors," not just CBA.¹³⁹ This raises the question of whether these other factors would have sufficed to motivate the stringent regulation adopted even without the CBA. In other words, the study demonstrates that a favorable cost-benefit ratio helped make the case for the rule, but it does not necessarily demonstrate that the rule was stricter than it would have been in the absence of CBA. In fact, in describing concretely the changes made in the rule as it progressed, the authors claim that EPA based its key requirement, an "action level" that triggered treatment obligations, on "technical feasibility" considerations.¹⁴⁰ Furthermore, although the CBA showed that the replacement of lead service pipes generated costs exceeding the quantified benefits,¹⁴¹ EPA required replacement when cheaper corrosion control proved ineffective.¹⁴² This lead service pipe replacement provision suggests that CBA could have justified weakening this rule, but that EPA decided instead to protect public health as much as feasible, as the statute required. The federal register notice itself does not claim that CBA influenced the decision in

133. MORGENSTERN, *supra* note 51, at 228.

134. *See id.* at 228-30 (pointing to numerous factors that influenced the rule).

135. *Id.* at 206.

136. *Id.* at 209.

137. *Id.* at 206-07.

138. *Id.* at 228.

139. *Id.*

140. *Id.* at 214.

141. *Id.* at 227-28.

142. *See* Maximum Contamination Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 56 Fed. Reg. 26,460, 26,503 (June 7, 1991) (to be codified at 40 C.F.R. pts. 141 & 142).

any way, instead relying solely upon feasibility and simplicity considerations to justify the regulation.¹⁴³

The strongest case for the idea that CBA has, at least once, led to strengthened rules involves the regulation of lead in gasoline. Considered in context, however, this case provides very limited support for CBA's neutrality.

When industry began to use lead as a gasoline additive in the 1920s, we already had substantial knowledge of lead's adverse effects.¹⁴⁴ Accordingly, public health officials questioned its introduction into gasoline.¹⁴⁵ Had a regime prohibiting pollution with a history of links to serious health effects been in place, this regime would have prohibited the introduction of lead into gasoline.¹⁴⁶ Instead, the government attempted to ascertain whether firm direct proof existed that lead in gasoline would poison consumers.¹⁴⁷ Since data did not exist to quantify the health effects or even directly prove their existence through environmental exposures, the Surgeon General allowed lead to be added to gasoline, thus authorizing the growing petroleum industry to create a serious public health problem that might have been avoided.¹⁴⁸

In the 1970s, however, Congress passed the Clean Air Act¹⁴⁹ and EPA began to address the problem of lead in gasoline.¹⁵⁰ EPA could not conclusively prove that leaded gasoline caused serious health effects at levels prevalent in the environment or estimate the probabilities of harm, largely because of the difficulty of distinguishing leaded gasoline's effect upon human health from that of other lead sources in the environment.¹⁵¹ EPA, however, had good reason to suspect the worst, given the abundant evidence of serious health damage from high levels of lead.¹⁵² Accord-

143. See *id.* at 26,472–77, 26,483–84.

144. See James Lincoln Kitman, *The Secret History of Lead*, THE NATION, Mar. 20, 2000, at 11, 12–13; see generally Gerald Markowitz & David Rosner, *Cater to the Children: The Role of the Lead Industry in a Public Health Tragedy, 1900–1955*, 90 AM. J. PUB. HEALTH 36 (2000).

145. Kitman, *supra* note 144, at 20, 26.

146. See *id.* at 32 (discussing 3000-year-old body of evidence that lead is a poison).

147. *Id.*

148. *Id.* at 12, 30, 32.

149. Clean Air Act Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (1970) (amended 1994). While this public law amended a pre-existing Clean Air Act, it expanded the federal role in securing clean air so significantly that I will refer to the 1970 Amendments as the “Clean Air Act.”

150. See *Ethyl Corp. v. EPA*, 541 F.2d 1, 7 n.1 (D.C. Cir. 1976) (en banc) (explaining that all sections of the Clean Air Act pertinent to the regulation of lead in gasoline were added in the 1970 Amendments).

151. See *id.* at 8, 10 (explaining the impossibility of distinguishing effects of general lead exposure made “hard proof” of danger from lead in gasoline “hard to come by”).

152. See *id.* at 7–9 (reviewing the evidence before EPA).

ingly, EPA ordered an eighty percent reduction of the lead content of gasoline, finding that lead posed a "significant risk of harm."¹⁵³ A panel of the United States Court of Appeals for the District of Columbia Circuit, however, reversed EPA's order, finding that the "case against auto lead emissions is a speculative . . . one at best."¹⁵⁴ Because EPA was unable to quantify the benefits from lead reduction, or even conclusively prove that benefits existed, a recent study argues that this regulation could not have passed a cost-benefit test.¹⁵⁵

Nevertheless, the District of Columbia Circuit, sitting en banc, reversed the panel decision by a narrow five to four vote and allowed EPA's lead reduction order to go into effect.¹⁵⁶ This decision interpreted EPA's authority to regulate fuel additives that "will endanger the public health" in a quite precautionary manner.¹⁵⁷ The majority opinion did not require proof that harm existed or was even probable.¹⁵⁸ Nor did it require much justification for the particular level of regulation chosen. Rather, it allowed EPA to draw conclusions from "suspected" relationships between facts, trends, theoretical projections, and preliminary data.¹⁵⁹ This sort of qualitative risk assessment justified the lead standard, but a quantitative risk assessment was then impossible.¹⁶⁰ Congress promptly made sure that the en banc view of the statute would endure by rewriting the statute to squarely repudiate the earlier panel decision that had refused to allow EPA to reach "speculative" conclusions. It amended the "will endanger" language to allow EPA to regulate when additives "may reasonably be anticipated to endanger the public health."¹⁶¹

The large reduction of lead in gasoline that followed the en banc decision made it possible to produce the data that made quantitative risk assessment feasible for further reductions of lead from gasoline. The re-

153. *Id.* at 12; Frank Ackerman, Lisa Heinzerling & Rachel Massey, *Applying Cost-Benefit to Past Decisions: Was Environmental Protection Ever a Good Idea?*, 57 ADMIN. L. REV. 155, 166 & n.63 (2005).

154. *Ethyl Corp. v. EPA*, 7 Env't Rep. Cas. (BNA) 1353, 1355 (D.C. Cir. 1975).

155. *See Ackerman et al., supra* note 153, at 161 ("Had we waited . . . for cost-benefit analysis to show us the way, we might still be waiting now.").

156. *See Ethyl Corp. v. EPA*, 541 F.2d 1, 55 (D.C. Cir. 1976) (en banc) (stating that EPA's lead abatement order could be enforced).

157. *Id.* at 12-13 (explaining the "precautionary interpretation" of the "will endanger" standard).

158. *See id.* at 17-18 (stating that the "will endanger" standard "does not require proof of actual harm" and then rejecting industry argument that the standard requires that the occurrence of the threatened harm be "probable").

159. *Id.* at 28.

160. *Id.*

161. 42 U.S.C. § 7545(c) (2000).

duction in lead allowed researchers to compare levels of lead in the blood after the lead reduction to levels prior to the EPA order.¹⁶² This comparison showed something that EPA only suspected at the time of the lead reduction order upheld in *Ethyl*: reductions in lead in gasoline translated into significant reductions of lead in the blood stream.¹⁶³ It also provided researchers with the opportunity to study the link between health effects and varied amounts of levels of lead in the blood, thus providing data to map out a dose response curve. This data then made it possible to make reasonable projections of some of the benefits that a further reduction of lead would provide.

Notwithstanding the emerging health data, OMB, the principal enforcer of CBA requirements in the Executive Order, and Vice-President Bush's regulatory task force sought to pressure EPA into significantly relaxing its standards for lead in gasoline shortly after President Reagan came into office.¹⁶⁴ This pressure did not reflect the results of any formal analysis, but used the "Executive [Order's] cost-benefit standard as an excuse for regulatory relief."¹⁶⁵ Indeed, the Reagan Administration sought to hinder the Center for Disease Control from requiring lead screening programs to report data to it.¹⁶⁶ Eric Olson, the author of a leading study of OMB review, cites this as a rare instance in which OMB lost a bureaucratic battle with EPA in the early Reagan administration.¹⁶⁷

Nevertheless, CBA does seem to have played a major role in motivating EPA to take a smaller subsequent step than the initial phase-out OMB had sought to relax, the phase-down of lead levels from small refiners in 1985.¹⁶⁸ While one might argue that an agency sufficiently dedicated to protecting public health would have done this anyway, in light of the strong scientific data brought into existence by precautionary regulation, the lead case study author makes clear that CBA helped focus the agency on this rule as a priority, when it faced no statutory deadline

162. See *United States Civilian Blood Lead Levels Down One-Third Preliminary Data Show*, 12 Env't Rep. (BNA) 1546 (Mar. 26, 1982) [hereinafter *Blood Lead Levels*] (decline is a clear result of the prior lead phase-down).

163. Kitman, *supra* note 144, at 37.

164. Olson, *supra* note 74, at 36–37; MCGARITY, *supra* note 1, at 30–31 (providing some detailed information about this development); *Blood Lead Levels*, *supra* note 162.

165. Seidenfeld, *supra* note 87, at 15. See MCGARITY, *supra* note 1, at 31–44 (describing the decision to engage in marginal cost-effectiveness analysis rather than CBA).

166. Kitman, *supra* note 144, at 37.

167. Olson, *supra* note 74, at 44. Cf. Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245, 2278–79 (2001) (by 1984, the OMB director could point to only five additional instances where EPA issued rules over OMB objections, four of them under judicial order).

168. MORGENSTERN, *supra* note 51, at 77.

to write this rule.¹⁶⁹ Hence, this case does seem to offer reasonably good evidence of CBA motivating an increase in stringency.

In both the case of regulation of lead in gasoline and in drinking water, the case study authors claim that CBA helped advance the case for stricter regulation. In the case of lead, however, even quantification of a tiny fraction of the benefits sufficed to show a positive net benefit. Indeed, the leaded gasoline example presented an unusually simple case for CBA, because a fairly costly environmental measure (lead reduction) passed muster in terms of economic net benefits, even without considering health benefits. Reducing lead in gasoline generated \$1.1 billion in savings from reduced vehicle maintenance and fuel costs, a figure nearly twice that of the estimated cost of EPA's proposed lead reduction.¹⁷⁰ In that circumstance, all of the problems with quantifying health effects that opponents of CBA complain about should not matter, since one could estimate the value as zero and still support the regulation on cost-benefit grounds. Hence, the lead in gasoline case shows that CBA can help make regulations stricter when regulators need not quantify health effects to demonstrate that a regulation passes a cost-benefit test.

C. OMB under President George W. Bush

The dozens of cases of OMB using demands for CBA to seek less stringent rules suggest that CBA, in practice, is anti-environmental, notwithstanding the lead case. This article updates the record with a study of the George W. Bush Administration's use of CBA. President Bush appointed an especially dedicated proponent of CBA, John Graham, to head the Office of Information and Regulatory Affairs (OIRA), the office with OMB that oversees compliance with Executive Order 12,866.¹⁷¹ So an advocate of CBA as a neutral reform might expect OMB to use CBA neutrally, rather than to use it in a generally predictable way to weaken almost all rules reviewed.

1. OMB Regulatory Review: A Systematic Survey

This subsection addresses a simple question, when OIRA significantly changes rules, does it always weaken them, or does it sometimes strengthen them? While this question is easy to ask, it is very difficult to

169. *Id.* at 52–53, 77.

170. *Id.* at 71.

171. See GAO 2003, *supra* note 53, at 44 (agency officials report that Graham's OIRA is "relentless" in demanding quantification of costs and benefits).

answer.¹⁷² So, this subsection focuses on a representative set of rules for intensive study.

In order to avoid problems of selection bias, this subsection reports results of a study of a data set created by the General Accounting Office (GAO). GAO recently published a study of all OMB reviews of rules from all major environmental, health, or safety agencies completed between June of 2001 and July of 2002.¹⁷³

GAO concluded that OMB “had significantly affected 25 rules” reviewed during this period.¹⁷⁴ So, this study examines all of these twenty-five rules to figure out whether OMB regularly suggested changes that would reduce environmental, health, and safety benefits in order to reduce regulatory burdens, or instead, frequently suggested changes that would increase environmental, health, and safety benefits, thereby likely raising the burdens on regulated parties.

A review of these rules showed that OMB never supported changes that would make environmental, health, or safety regulations more stringent. In twenty-four of the twenty-five cases, all of the changes that OMB suggested would weaken environmental, health, or safety protection.¹⁷⁵ In one case, OMB returned an FAA rule because of concern about a provision that would have no discernible impact on safety.¹⁷⁶ In every single case, OMB favored changes that would reduce the burdens

172. In order to answer this question, I have examined documents in agency rulemaking dockets, information in the GAO report, federal register notices, judicial decisions, and reports from environmental groups. I have also interviewed government officials within agencies and OMB, but generally preserved their anonymity by not citing them. I have sought to corroborate any data received through interviews or environmental groups with documentary evidence.

173. GAO 2003, *supra* note 53, at 5. I use the term “major environmental, health, or safety agency” to refer to all agencies that submitted five or more health, safety, or environmental reviews during the period GAO reviewed. *See id.*

174. *Id.* The GAO defines significant changes as those affecting “the scope, impact, or estimated costs and benefits” of the rule. *Id.* at 73.

175. I set out a list of rules in the appendix.

176. This case involved an FAA rule governing certification of foreign repair stations to fix FAA regulated airplanes. *See* Repair Stations, 66 Fed. Reg. 41,088 (Aug. 6, 2001) (to be codified at 14 C.F.R. pts. 91, 121 135, 145). OMB objected to a requirement that foreign repair stations show that their services are needed by FAA-regulated aircraft as potentially inconsistent with United States free trade obligations. *See* Letter from Donald R. Arbuckle, Deputy Adm’r, Office of Info. & Regulatory Affairs, to Rosalind A. Knapp, Deputy Gen. Counsel, Dep’t of Transp., (July 20, 2001), available at <http://www.whitehouse.gov/omb/inforeg> (use the “site search” function and enter “repair stations;” then follow the first hyperlink that appears in the ensuing window entitled: “FAA Repair Stations”). Since this requirement makes certification dependent on practical necessity, rather than safety, it is unlikely that OMB’s initial opposition to this requirement, if adopted, would have undermined safety in anyway. FAA initially adopted this requirement simply to limit its own workload. *See* Foreign Repair Station Rules, 53 Fed. Reg. 47,362 & 47,366 (Nov. 22, 1988) (to be codified at 14 C.F.R. pts. 135 & 145).

of regulation on regulated parties. This suggests that, in practice, CBA is used consistently to oppose environmental, health, and safety regulation.

Table 2: *Nature of Changes Sought by OMB*

	Yes	No
Anti-Environmental, Health, or Safety	24	1
Burden Reducing	25	0
Stricter	0	25

a. Examples of the Changes OMB Sought and their Significance.

OMB review wholly eviscerated some regulations. For example, at OMB's urging, EPA scratched plans to promulgate new effluent guidelines regulating one of the most significant remaining sources of water pollution, storm runoff from construction.¹⁷⁷ Runoff is the largest known source of bacterial contamination, which leads to thousands of annual beach closures in the United States.¹⁷⁸ It also has enormous negative impacts on both water quality and supply.¹⁷⁹ Runoff occurs both during construction and afterwards.¹⁸⁰ So, changes in how construction is carried out and in the design of development projects can reduce runoff.¹⁸¹ But OMB opposed EPA's rule to address these impacts, and EPA eventually decided to scratch meaningful federal controls.¹⁸²

Each year, plants generating electricity kill numerous aquatic organisms, including fish, marine mammals, sea turtles, shellfish, and crustaceans, because large plants take in more than 70 trillion gallons of water.¹⁸³ Indeed, one large facility, the Salem nuclear power plant, kills

177. See GAO 2003, *supra* note 53, at 176. Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development Category, 69 Fed. Reg. 22,472 (Apr. 26, 2004) (to be codified at 40 C.F.R. pt. 450) [hereinafter Construction Rule Withdrawal] (withdrawing the proposed effluent guidelines to which OMB objected).

178. NANCY STONER & ROBIN GREENWALD, COMMENTS OF THE NATURAL RESOURCES DEFENSE COUNCIL AND THE WATERKEEPER ALLIANCE ON EPA'S PROPOSED EFFLUENT GUIDELINES AND STANDARDS FOR THE CONSTRUCTION AND DEVELOPMENT CATEGORY 2-3 (Dec. 20, 2002) (copy on file with author).

179. *Id.* at 2-5.

180. See *id.* at 3.

181. See *id.* at 4-5; Effluent Limitation Guidelines and New Source Performance Standards for the Construction and Development Category, 67 Fed. Reg. 42,644 (proposed June 24, 2002) (to be codified at 40 C.F.R. pts. 122, 450).

182. See Construction Rule Withdrawal, *supra* note 177.

183. OMB Watch, OMB Weakens EPA Proposal to Limit Fish Kills from Power Plants (Sept. 4, 2002), <http://www.ombwatch.org/article/articleview/1074/1/132>.

359.4 million fish annually through water intake.¹⁸⁴ Accordingly, EPA proposed that sixty-nine large plants in ecologically sensitive areas recirculate or reuse water to reduce fish kills by up to ninety-eight percent.¹⁸⁵

OMB disapproved of this proposal and persuaded EPA to adopt a cheaper and much less stringent proposal.¹⁸⁶ EPA's weaker final rule ostensibly required a sixty percent reduction in entrainment.¹⁸⁷ But it allowed pollution sources to evade this requirement by agreeing to restoration measures¹⁸⁸ of dubious efficacy. The United States Court of Appeals invalidated this restoration provision as contrary to the Clean Water Act.¹⁸⁹ OMB favored changes in this rule that greatly reduced its capacity to protect the environment.

Large ships and tankers generate over 200,000 tons of nitrogen oxide emissions per year.¹⁹⁰ Nitrogen oxide emissions contribute to particulate pollution, which scientists associate with tens of thousands of annual deaths in the United States.¹⁹¹ It also acts as a key ingredient in the formation of ground level ozone, which causes lung damage and exacerbates asthma, leading to thousands of emergency room visits every summer.¹⁹²

EPA prepared a proposal to implement modest "tier one" limits on emissions already agreed to by international treaty and which embody the limits already achieved by industry.¹⁹³ It also proposed a second tier of standards providing a thirty percent reduction below the tier one lev-

184. *Id.*

185. See National Pollutant Discharge Elimination System—Regulations Addressing Cooling Water Intake Structures for New Facilities, 65 Fed. Reg. 49,059, 49,103 (proposed Aug. 10, 2000) (to be codified at 40 C.F.R. pts. 9, 122, 123, 124, 125) (estimating 72 to 98% reduction in entrainment); National Pollutant Discharge Elimination System—Regulations Addressing Cooling Water Intake Structures for New Facilities, 66 Fed. Reg. 65,256, 65,266 (Dec. 18, 2001) (to be codified at 40 C.F.R. pts. 9, 122, 123, 124, 125) (rule would apply to 69 plants in ecologically sensitive areas).

186. See GAO 2003, *supra* note 53, at 195–96 (detailing the changes).

187. OMB Watch, *supra* note 183.

188. See *Riverkeeper v. EPA*, 358 F.3d 174, 189 (2d Cir. 2004) (describing restoration measures alternative).

189. See *id.* at 189–91.

190. Control of Emissions From New Marine Compression-Ignition Engines At or Above 30 Liters Per Cylinder, 68 Fed. Reg. 9746, 9755 (Feb. 28, 2003) (to be codified at 40 C.F.R. pts. 9, 94) [hereinafter *New Large Marine Compression-Ignition Engines*].

191. See *Bluewater Network v. EPA*, 372 F.3d 404, 407 (D.C. Cir. 2004).

192. See *id.* at 407. Ships also emit carbon monoxide. *Id.* And nitrogen oxide can impair visibility and acidify eco-systems. *Id.*

193. See *id.* at 408; Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines At or Above 30 Liters/Cylinder, 67 Fed. Reg. 37,548, 37,597–98 (proposed May 29, 2002) (to be codified at 40 C.F.R. pt. 94) [hereinafter *Proposal on New Large Marine Engines*].

els.¹⁹⁴ OMB opposed the tier two limits and EPA finalized a rule that did nothing more than formalize limits that industry already had met.¹⁹⁵

Scientists have linked manganese to a variety of health problems, including respiratory problems, sexual dysfunction, damage to the nervous system, mental and emotional disturbances, and Manganism, a disease with symptoms similar to Parkinson's disease.¹⁹⁶ Accordingly, EPA proposed to list manganese as a hazardous waste, which would trigger obligations to treat it properly to prevent contamination of drinking water and soil.¹⁹⁷ OMB opposed the listing and EPA abandoned it.¹⁹⁸

The National Transportation Safety Board linked an airplane crash to the failure to adequately control corrosion, and found that many of the operators' aircraft had the same problem. The Board recommended that in light of the danger corrosion presented to the aging airline fleet, the FAA should develop a model corrosion control program. The FAA followed up with a proposed rule to require prevention of corrosion that could cause planes to crash.¹⁹⁹ OMB rejected the rule on the grounds

194. Proposal on New Large Marine Engines, *supra* note 193, at 37,551.

195. New Large Marine Compression-Ignition Engines, *supra* note 190 at 9,748-49; GAO 2003, *supra* note 53, at 160.

196. See C.W. Olanow, *Manganese-Induced Parkinsonism and Parkinson's Disease*, 1012 ANN. N.Y. ACAD. SCI. 209 (2004) (discussing the similarities and differences between Manganism and Parkinson's Disease); H. Sincuk-Walczak, M. Jakubowski, & W. Matczak, *Neurological and Neurophysiological Examinations of Workers Occupationally Exposed to Manganese*, 14 INT'L. J. OCCUP. ENVTL. HEALTH 329 (2001) (discussing increased emotional irritability, dysmenasia, concentration difficulties, sleepiness and limb paresthesia in workers subjected to low level manganese exposure); D. Mergler & M. Baldwin, *Early Manifestations of Manganese Neurotoxicity in Humans: An Update*, 73 ENVTL. RES. 92 (1997) (discussing the pattern of slowing motor functions, increased tremor, reduced response speed, enhanced olfactory sense, memory and intellectual deficits, and mood changes that result from exposure to manganese); B. Baranski, *Effects of the Workplace on Fertility and Related Reproductive Outcomes*, 101 ENVTL. HEALTH PERSP. (SUPP.) 81 (1993) (discussing sexual dysfunction associated with manganese exposure).

197. Even without listing, some waste containing magnesium would trigger treatment obligations under the Resource Conservation and Recovery Act (RCRA). Non-listed waste is treated as hazardous waste if it exhibits a toxic characteristic based on testing. Regulated parties, however, might escape treatment obligations by diluting a waste exhibiting a toxic characteristic. The EPA, however, treats waste mixed from or derived from a listed waste as a hazardous waste. Hence, the decision not to list magnesium might well exempt some waste from treatment obligations.

198. GAO 2003, *supra* note 53, at 9; Memorandum from Robert Kayser to RCRA Docket Number F-2001-ICMF-FFFF, Final Rule Changes Resulting from OMB Comments, 32-33, Oct. 31, 2001 (on file with author) (explaining the reasons for OMB opposition); Hazardous Waste Management System, Identification and Listing of Hazardous Waste: Inorganic Chemical Manufacturing Wastes; Land Disposal Restrictions for Newly Identified Wastes; and CERCLA Hazardous Substance Designation and Reportable Quantities, 66 Fed. Reg. 58,258, 58,260 (Nov. 20, 2001) (to be codified at 40 C.F.R. pts. 148, 261, 271, 302).

199. See Corrosion Prevention and Control Program, 67 Fed. Reg. 62,142 (proposed Oct. 3, 2002) (to be codified at 14 C.F.R. pts. 121, 128, 135).

that the FAA had not performed an adequate cost-benefit analysis and should better coordinate its various rulemaking initiatives.²⁰⁰

OMB intervention seeking significant changes in rules sometimes did not have such dramatic results.²⁰¹ For example, OMB sought changes in a rule regulating motorcycle emissions that would expand exemptions for small manufacturers and weaken the stringency of an emissions trading option.²⁰² More importantly, it questioned the safety of catalytic converters, the primary technology EPA relied upon in concluding that regulated companies could comply with the rule's limits.²⁰³ In the end, however, EPA persuaded OMB to live with the rule as written, after motorcycle companies supported EPA's preferred approach to averaging and argued that the safety concerns were ill-founded.²⁰⁴

b. Conclusions from the Twenty-Five Cases

While the results of OMB review varied, the substantive direction basically did not. OMB almost always (twenty-four out of twenty-five times) suggested that agencies delay or weaken safety, health, and environmental protections in some way.

Proponents of CBA suggest that CBA avoids "lavish" expenditures on trivial regulations, while strengthening regulations that might "do some good." The data do not suggest that anything like this is going on.

First of all, in all six of the cases where an agency provided a CBA, the agency ultimately found that the benefits would exceed the costs.²⁰⁵

200. See GAO 2003, *supra* note 53, at 179.

201. OMB intervention, for example, sometimes focused on changing compliance deadlines. See, e.g., GAO 2003, *supra* note 53, at 161 (reporting rule).

202. See Responses to OMB Questions/Issues Highway Motorcycles Final Rule, item 13, in Docket A-2000-02, IV-H-7 (Oct. 21, 2003) (on file with author) [hereinafter Responses to OMB Questions]; Control of Emissions from New and In-Use Highway Vehicles and Engines, 40 C.F.R. § 86.407-78 (2004) [hereinafter Highway Motorcycle Rule]; Letter from Robert French, EPA, to Amy L. Farrell, OMB, re: Limitations on Averaging, A-2000-02, IV-H-12 (Oct. 21, 2003) (on file with author).

203. See Responses to OMB Questions, *supra* note 202, item 14.

204. See Memorandum from Karl Simon, OTAG to Air Docket A-2002-02, re: Meeting Summary, Air Docket A-2000-02, IV-E-26 (Dec. 1, 2003) (recounting the meeting). See also Email from Karl Simon, USEPA, to Amy Farrell, OMB, re: Closure of NHTSA, Investigation of Honda Gold Wing Frame Failure (Oct. 17, 2003), Air Docket A-2000-02, IV-H-29; Control of Emissions from Highway Motorcycles, 69 Fed. Reg. 2398 (Jan. 15, 2004) (to be codified at 40 C.F.R. pts. 9, 86, 90, 1051).

205. See Frank Ackerman, Uses and Abuses of Economic Analysis in Setting Stormwater Regulations 6 (Dec. 18, 2002) (explaining that after EPA's consultant corrected initial errors, the agency concluded that monetized benefits outweigh costs), <http://www.waterkeeper.org/PBK/attach.doc>; EPA, ECONOMIC AND BENEFITS ANALYSIS FOR THE FINAL SECTION 316(B) PHASE II EXISTING FACILITIES RULE, A2-2 (Feb. 2004) [hereinafter EXISTING FACILITIES ECONOMIC ANALYSIS], available at <http://www.epa.gov/waterscience/316b/econbenefits/final>

Yet OMB favored weaker regulation or opposed the regulation in all six cases.²⁰⁶

Table 3: OMB's Response to Favorable Cost-Benefit Ratios

	Agency Found Favorable Cost-Benefit Ratio
OMB Seeks Laxer Regulation	6
OMB Disputes Favorable Ratio	3
OMB Does Not Dispute Favorable Ratio	3
Number of Rules Surveyed	(6)

In three of these cases, OMB did not seem to dispute the agency's contention that benefits exceeded cost, but urged the agency to weaken its standards anyway.²⁰⁷ EPA's rule limiting emissions from snowmo-

.htm; EPA, ECONOMIC ANALYSIS OF THE FINAL REGULATIONS ADDRESSING COOLING WATER INTAKE STRUCTURES FOR NEW FACILITIES, 2-2 (Nov. 2001), *available at* <http://www.epa.gov/waterscience/316b/>; Control of Emissions from Nonroad Large Spark-Ignition Engines and Recreational Vehicles (Marine & Land-Based), 67 Fed. Reg. 68,242, 68,244 (proposed Nov. 8, 2002) (to be codified at 40 C.F.R. pts. 89, 90, 91, 94, 1048, 1051, 1065, 1068) [hereinafter Snowmobile Rule] (estimating costs of \$210 million, "social gain" from fuel savings of \$550 million, and benefits of \$8 billion); Pub. Citizen, Inc. v. Mineta, 340 F.3d 39, 58-59 (2d Cir. 2003) (benefits of NHTSA's proposal to monitor the pressure of all four tires outweigh the costs); Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 67 Fed. Reg. 5368, 5397-99 (proposed Feb. 5, 2002) (to be codified at 14 C.F.R. pts. 1, 21, 43, 45, 61, 65, 91); Corrosion Prevention and Control Program, 67 Fed. Reg. 62,141, 62,152 (proposed Oct. 3, 2002) (withdrawn at 69 Fed. Reg. 50,350 (Aug. 16, 2004)) [hereinafter Corrosion Rule] (concluding that the safety benefits of the rule justify its costs).

206. See *infra* notes 247-51 and accompanying text. Cf. Farrow, *supra* note 126, at 176 (finding that economic analysis of offshore gas and oil leasing decisions met a "de minimus standard for affecting decisions based on statistical significance").

207. See National Pollutant Discharge Elimination System: Regulations Addressing Cooling Water Intake Structures for New Facilities, 66 Fed. Reg. 65,256, 65,266 (Dec. 18, 2001) (to be codified at 40 C.F.R. pts. 9, 122-25) (EPA's rule protecting fish from power plant water intakes); Corrosion Rule, *supra* note 205, at 62,142 (FAA's rule on addressing corrosion in airplanes); Snowmobile Rule, *supra* note 205, at 68,242 (EPA's rule on emissions from snowmobiles and other recreational vehicles). In some of these cases, OMB did question the cost-benefit analysis, but there is no suggestion in the docketed communications that these objections would lead to flipping the conclusion that benefits exceed costs.

In the rule involving saving fish from water intake impacts on power plants, I have no information indicating that OMB disputed the conclusion that benefits outweighed costs, but it may have thought that a laxer rule would generate a larger benefit-to-cost ratio. See EXISTING FACILITIES ECONOMIC ANALYSIS, *supra* note 205, at D1-4. There is also reason to believe that OMB did take issue with EPA's analysis of costs and benefits in various ways. But it is not clear that OMB believed that the costs outweighed the benefits, especially as many important benefits were not quantified.

The corrosion rule addressed an inspection program that would not be expected to generate very large costs and could save lives. I analyze the snowmobile rule below.

biles provides an example of that sort of case. EPA originally proposed a fifty percent reduction in snowmobile pollution and produced a CBA showing that the monetary benefits from the fuel savings alone was more than double the implementation cost, even without considering any environmental benefit.²⁰⁸ OMB apparently agreed that benefits exceeded costs,²⁰⁹ but did not consider the analysis adequate.²¹⁰ It complained about EPA's failure to discuss whether particular models of snowmobiles might be forced off the market, suggested that EPA consider more regulatory alternatives, and demanded that EPA quantify the environmental benefits.²¹¹ Faced with a set of nearly impossible demands, since visibility and habitat impacts defy reliable quantification, and differentiating impacts upon different snowmobile models would require an enormous investment of agency resources and the cooperation of the industry resisting the regulation, EPA simply weakened the regulation.²¹² It promulgated a rule demanding only a thirty percent reduction in carbon monoxide.²¹³ In justifying this relatively weak standard, it relied rather heavily upon OMB's concern that stricter standards might force some models of snowmobiles off the market.²¹⁴

208. See OMB 2004, *supra* note 17, at 106 (estimating annual compliance cost at \$190 million annually and fuel cost savings at \$770 million annually).

209. See OMB, INFORMING REGULATORY DECISIONS: 2003 REPORT TO CONGRESS ON THE COSTS AND BENEFITS OF FEDERAL REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES 11 (2003) [hereinafter OMB 2003], http://www.whitehouse.gov/omb/inforeg/2003_cost-ben_final_rpt.pdf (EPA recreational engine rule had monetized benefits exceeding costs). While OMB does not formally approve the cost or benefit estimates in this and similar reports, research has revealed no OMB objection to the agency's overall conclusion.

210. See Letter from John Graham, OIRA Adm'r, to Jeffrey Holmstead, Assistant Adm'r for Air and Radiation, EPA (Sept. 24, 2001), available at http://www.whitehouse.gov/omb/inforeg/spark_engines_epa_sep2001.html.

211. See *id.*

212. See *Bluewater Network v. EPA*, 370 F.3d 1, 21 (D.C. Cir. 2004) (EPA implicitly assumed that no snowmobile models could be eliminated); Amy Sinden, *The Economics of Endangered Species: Why Less is More in the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENVTL. L. REV. 129, 185 (2004) (referring to the "mind-boggling complexity of ecological processes"); Developments in the Law—International Environmental Law, 3 *The Creation of International Environmental Agreements*, 104 HARV. L. REV. 1521, 1530–31 (1991) (referring to the difficulties in quantifying environmental harms). In order to understand an emission standard's impact on all existing snowmobile models, EPA might have to acquire marginal cost information for each model and a model-specific understanding of engineering difficulties as well. It would have to acquire this information from an industry that does not have much interest in facilitating regulation. See generally Thomas O. McGarity, *Regulatory Analysis and Regulatory Reform*, 65 TEX. L. REV. 1243, 1275 (1987) (agencies rarely have the resources to explore the advantages and disadvantages of a wide array of alternatives).

213. See *Bluewater*, 370 F.3d at 10.

214. *Id.* at 21.

The United States Court of Appeals for the District Columbia Circuit reviewed this rule in *Bluewater Network v. EPA*.²¹⁵ The court chided EPA for implicitly assuming that “no existing models could be eliminated.”²¹⁶ As a result of EPA’s decision to act on the basis of OMB’s concerns, the court found EPA’s rule arbitrary and capricious.²¹⁷ As the court noted, however, EPA had not linked this concern to the statutory feasibility criterion, which allowed the agency to consider cost.²¹⁸ While EPA could not quantify the environmental benefits of the rule, it eventually quantified the health benefits, which it estimated at \$8 billion.²¹⁹ While the disparity between the \$8 billion dollar benefit estimate and the \$210 million estimated cost suggested that the rule was too lax, OMB did not push for a more stringent rule based on this disparity. Instead, it encouraged EPA to promulgate a rule that was so lax as to be held arbitrary by the United States Court of Appeals for the District of Columbia Circuit.

In three of the six cases involving CBA, however, OMB disagreed with the agency’s conclusion that benefits exceeded costs.²²⁰ In one of

Table 4: Cases in Which OMB Disputed Favorable Cost-Benefit Ratios

	Court Disagrees with OMB	Benefits Disputes
Construction Effluent Guidelines		X
Light-Sport Aircraft Rule		X
Tire Pressure Monitoring Rule	X	X

three cases, a court implicitly held that OMB was wrong. This case involved a response to the Department of Transportation (DOT) investiga-

215. *Id.* at 1.

216. *Id.* at 21.

217. *Id.*

218. *Id.*

219. See Snowmobile Rule, *supra* note 205, at 68,244.

220. See Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development Category, 69 Fed. Reg. 22,472 (proposed Apr. 26, 2004) (to be codified at 40 C.F.R. pt. 450) (stormwater runoff rule); Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 67 Fed. Reg. 5368 (proposed Feb. 5, 2002) (codified as amended at 14 C.F.R. pts. 1, 21, 43, 45, 61, 65, & 91 (2005)) (FAA proposal to regulate sport aircraft); *Pub. Citizen, Inc. v. Mineta*, 340 F.3d 39 (2d Cir. 2003) (NHTSA proposal to require devices monitoring tire pressure). Such disagreements occurred regularly under previous administrations as well. See Seidenfeld, *supra* note 87, at 43 (discussing “fundamental differences” between how OMB staff and agency officials “valued particular costs and benefits”).

tion into tread separation on two models of Bridgestone/Firestone tires installed on Ford Explorers, which led to the recall of over 14 million tires.²²¹ In response, Congress passed the Transportation, Recall, Enhancement, Accountability, and Documentation Act²²² in 2000, which included a provision requiring the DOT to issue a rule establishing warning systems for under-inflated tires.²²³ OMB issued a “return” letter opposing the proposed rule establishing a four-tire warning system and urging the agency to ignore the focused Congressional mandate in favor of a rule based on “overall vehicle safety” concerns.²²⁴ OMB believed that a weaker standard than the “four tire” monitoring option the DOT proposed would save more lives, because it would encourage use of anti-lock brakes.²²⁵ The DOT’s National Highway and Transportation and Safety Administration (NHTSA) disagreed with the assumption that laxer standards would translate into more anti-lock brakes or that anti-lock brakes could be shown to save lives.²²⁶ This difference in engineering judgment and predictions about indirect responses to regulatory requirements produced different conclusions about costs and benefits.²²⁷ NHTSA has much more expertise in judging the safety effects of braking systems and predicting automobile industry responses to regulation than OMB. Yet, under pressure from OMB, DOT omitted the proposed stricter standard that OMB had rejected from its final rule and adopted a less stringent option.²²⁸ The United States Court of Appeals for the Second Circuit rejected the approach that DOT adopted at the behest of OMB as contrary to the statute and unreasonable, because the record showed that a stricter standard would not only prevent more injuries and save more lives, but also be more cost effective than the laxer standard DOT adopted.²²⁹

The two other cases where OMB disagreed with an agency conclusion that benefits exceeded costs involved disputes about which of several plausible benefits estimates to accept, rather than an OMB claim that benefits were trivial. Thus, these were not cases where OMB concluded

221. *Mineta*, 340 F.3d at 43.

222. Pub. L. No. 106-414, § 13, 114 Stat. 1800, 1806 (2000), *reprinted in* 49 U.S.C.A. § 30,123 (2005).

223. *Mineta*, 340 F.3d at 43–44.

224. Letter from John D. Graham, OIRA Adm’r, OMB, to Kirk K. Van Tine, Gen. Counsel, Dep’t of Transp. (Feb. 12, 2002), http://www.whitehouse.gov/omb/inforeg/return/dot_revised_tire_rtnltr.pdf.

225. *See id.*

226. *Mineta*, 340 F.3d at 50.

227. *See* OMB 2003, *supra* note 209, at 11 (asserting that the Tire Pressure Monitoring Rule (TPMR) had negative net benefits of \$706 to \$862 million per year).

228. *Mineta*, 340 F.3d at 50–51.

229. *Id.* at 42.

that the agency was demanding lavish expenditures upon trivial risks. For example, in the rule regulating stormwater runoff, EPA estimated the cost of its preferred option at \$2.46 billion.²³⁰ Benefit estimates developed during the rulemaking ranged from \$610 million to \$30.6 billion for the handful of benefits that could be monetized.²³¹ EPA's consultant, Eastern Research Group, ultimately concluded that the "best estimate" of this tiny subset of benefits was between \$3.2 billion and \$5 billion, which would support a conclusion that the monetized benefits alone outweighed all the costs.²³² EPA, however, was unable to quantify and monetize many significant benefits that it believed its draft rule would provide. The non-quantified benefits included the value of improved recreation on water bodies (such as from keeping beaches open), the improvements in biodiversity, and the health benefits from reduced bacterial contamination; in short, they included many of the most important benefits from the rule.²³³ Because of difficulties in correlating a particular industry's activities to specific harms, which vary depending upon local water quality conditions, EPA was reduced to relying solely upon estimates of the monetized value of avoided dredging and water storage and treatment costs. Thus, the emphasis on monetized benefits diverted attention from the rule's most important benefits.²³⁴

OMB argued for a lower estimate of monetized benefits than EPA's consultant suggested, even though the consultant's suggestion lay near the bottom of the plausible range.²³⁵ OMB also apparently did not find the significant non-quantified benefits important. This difference in views about which value to choose for the monetized benefits and whether non-quantified benefits deserved any weight—not a suggestion that the benefits were trivial—largely explains the cost-benefit based portion of the dispute between OMB and EPA on this rule.²³⁶

230. Nancy Stoner & Robin Greenwald, Comments of the Natural Resources Defense Council and the Waterkeeper Alliance on EPA's Proposed Effluent Guidelines and Standards for the Construction and Development Category 22 (Dec. 22, 2002) (citing docket materials), available at <http://www.waterkeeper.org/PBK/nrdc.doc>.

231. See Ackerman, *supra* note 205, at 5.

232. *Id.* at 6.

233. See ECONOMIC ANALYSIS OF PROPOSED EFFLUENT LIMITATION GUIDELINES AND NEW SOURCE PERFORMANCE STANDARDS FOR THE CONSTRUCTION AND DEVELOPMENT CATEGORY 7-1-7-11 (May, 2002), http://www.epa.gov/waterscience/guide/construction/C&D_econ_proposed.pdf.

234. See Effluent Limitation Guidelines and New Source Performance Standards for the Construction and Development Category, 67 Fed. Reg. 42,644, 42,674-75 (proposed June 24, 2002) (to be codified at 40 C.F.R. pts. 122, 450).

235. Ackerman, *supra* note 205, at 5 (OMB argued for a lower estimate than the \$1.13 billion originally estimated by EPA, which involved a miscalculation understating benefits).

236. OMB also objected to this rule on federalism grounds. See OMB 2004, *supra* note 17, at 107 (because "the . . . ecological impacts . . . are largely local in nature, EPA ultimately

The other rule that generated a similar dispute about whether benefits exceeded costs, a rule for regulating sports airplanes, involved much less cost and much less monetized benefit.²³⁷ Nevertheless, it would be hard to argue that avoiding some of the fifty-one deaths in sport airplane accidents that motivated this rule would constitute a trivial benefit.²³⁸

This data set also contradicts the assumption of regulatory reformers that regulatory review primarily discourages expensive rules generating trivial benefits in another way. Most regulatory review focuses on economically insignificant rules, i.e., rules costing less than \$100 million a year.²³⁹

Table 5: OMB's Emphasis on Economically Insignificant Rules: 2002–2003

	Significant Rules*	Insignificant Rules
Rules Reviewed	14	71
Significant Changes Sought	5	20

* This refers to economically significant rules, meaning those costing \$100 million per year or more.

decided to work with State and local governments . . ." instead of promulgating fresh regulations). OMB has objected to other rules on federalism grounds in the past. *See, e.g., New York v. Reilly*, 969 F.2d 1147, 1148–50 (D.C. Cir. 1992) (OMB opposed requirements that municipal waste combustors separate out recyclable materials and avoid burning batteries in part on federalism grounds).

237. The FAA estimated the cost of compliance at \$9.8 million per year over ten years (\$7.8 million discounted). Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 67 Fed. Reg. 5368, 5396 (proposed Feb. 5, 2002). It estimated the monetized benefits of avoided deaths alone, valued at only \$2.7 million per fatality, as greatly exceeding this cost. *See id.* at 5396–99 (estimating the benefits of avoiding deaths at \$221.4 million [\$153.3 million discounted] over ten years).

238. *See id.* at 5397 (51 fatalities occurred in light-sport aircraft between 1995 and 2001). The FAA ultimately promulgated a regulation of light-sport aircraft. *See* Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 69 Fed. Reg. 44,772 (July 27, 2004) (to be codified at 14 C.F.R. pts. 1, 21, 43, 45, 61, 65, 91). Hence, OMB opposition ultimately delayed, rather than permanently derailed, this rule.

239. While the Executive Order emphasizes review of rules costing more than \$100 million, it also authorizes review on a variety of ill-defined grounds that open the doors to just about anything. *See* Exec. Order No. 12,866, *supra* note 54, §§ 3(f), 6(b)(1). It defines as significant actions subject to OMB review rules that have a material adverse impact upon the "economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments." *Id.* § 3(f)(1). Rules that have no negative economic impact but interfere with another agency's planned action also constitute significant reviewable rules. *Id.* § 3(f)(2). Rules materially altering "entitlements, grants, user fees, or loan programs" fall within the order's purview as well. *Id.* § 3(f)(3). And finally, the Executive Order contains a very broad catch-all category for rules raising "novel legal or policy issues" (which arguably almost any rule does). *Id.* § 3(f)(4).

GAO found that OMB reviewed seventy-one economically insignificant rules but only fourteen economically significant ones from the data it examined. Indeed, the economic triviality of some of the rules OMB saw fit to try and weaken is striking. It sought to weaken rules consolidating state emissions reporting requirements,²⁴⁰ charging fees to support government testing of vehicle emissions,²⁴¹ and establishing an administrative prerequisite for FAA certification of foreign aircraft repair stations.²⁴² Because of OMB's focus on economically insignificant rules, OMB sought significant changes in twenty economically insignificant rules and only five economically significant ones.²⁴³ While the percentage of economically important rules that OMB changed significantly was slightly higher than the percentage of economically unimportant rules, GAO found this difference statistically insignificant.²⁴⁴ The hypothesis that OMB-administered CBA serves primarily to reign in very expensive rules addressing trivial risks is inconsistent with the facts, which demonstrate more review and more change of economically insignificant rules than of significant ones and no rules aimed at trivial risks.²⁴⁵ OMB review does not focus on expensive rules generating trivial risks.

The demand for CBA also sometimes led to OMB opposition to regulation where an agency could not quantify the benefits of its proposals. In nineteen of the twenty-five rules reviewed, the agencies were unable to monetize any of the proposals' benefits prior to OMB review.²⁴⁶

240. See Consolidated Emissions Reporting, 67 Fed. Reg. 39,602 (June 10, 2002) (to be codified at 40 C.F.R. pt. 51).

241. See Motor Vehicle and Engine Compliance Program Fees for: Light-Duty Vehicles; Light-Duty Trucks; Heavy-Duty Vehicles and Engines; Nonroad Engines; and Motorcycles, 67 Fed. Reg. 51,402, 51,413-15 (Aug. 7, 2002) (to be codified at 40 C.F.R. pts. 85-86).

242. See Letter from Donald R. Arbuckle, Deputy Adm'r, Office of Info. & Regulatory Affairs, to Rosalind A. Knapp, Gen. Counsel, Dep't of Transp. (July 20, 2001), available at http://www.whitehouse.gov/omb/inforeg/return/faa_repair_stations_rtnltr-dot.html.

In this case, the FAA ultimately convinced OMB to accept the requirement it had focused much of its attention upon initially. See Repair Stations, 66 Fed. Reg. 41,088, 41,095 (Aug. 6, 2001) (to be codified at 14 C.F.R. pts. 91, 121, 135, 145) (promulgating the requirement that foreign repair stations demonstrate that FAA-regulated aircraft need their services in order to obtain FAA certification).

243. GAO 2003, *supra* note 53, at 83.

244. *Id.*

245. The focus on the economically insignificant flagged in the GAO report did not involve an anomaly. During the subsequent period from October 1, 2002 to September 30, 2003, OMB reviewed 349 final rules, of which only thirty-seven, approximately 11%, were economically significant. OMB 2004, *supra* note 17, at 6-7. Of these major rules, twenty-five implemented federal budgetary programs. *Id.* Only twelve involved social regulations generating new costs and benefits. *Id.*

246. Similar patterns have prevailed in the past. See Robert W. Hahn, *The Economic Analysis of Regulation: A Response to Critics*, 71 U. CHI. L. REV. 1021, 1036 (2004) (noting

Table 6: Basis for OMB Review

	Cases
Completed Agency CBA	6
Inability to Monetize or Other Reasons	19

The agencies had legitimate reasons for this. For example, EPA could not quantify the benefits of reductions of nitrogen oxide emissions from large ships. Nitrogen oxide is a precursor to particulate pollution (associated with tens of thousands of deaths annually in the United States)²⁴⁷ and ozone (exacerbating millions of asthma cases),²⁴⁸ so there is reason to believe that stringent standards for ships could deliver substantial benefits. But EPA did not have adequate port-specific emission inventories, which would be necessary to correlate emissions with specific regional health impacts to quantify those benefits.²⁴⁹ Yet, a demand for CBA makes rules that would meet applicable statutory criteria suspect at OMB, just because the benefits resist quantification.

that agencies only monetized benefits in 26% of all regulations from 1981 to 1996). Since Hahn's statistic applies to all regulations, not just difficult to quantify environmental regulations, his statistic suggests very little monetization of environmental benefits.

247. The American Lung Association, *State of the Air 2005*, available at <http://www.lungusa.org/site> ("[T]ens of thousands of premature deaths each year are attributed to find particle air pollution."); Natural Resources Defense Council, *Breath-Taking: Premature Mortality Due to Particulate Air Pollution in 239 American Cities* (1996), available at <http://www.nrdc.org/air/pollution/bt/btinx.asp>; Joel E. Schwartz et al., *The Concentration-Response Relationship Between PM 2.5 and Daily Deaths*, 110 ENVTL. HEALTH PERSP. 1025, 1028 (2002) (associating particulate pollution with between 50,000 and 100,000 excess deaths in the United States and comparable numbers in Europe); JOHN SPENGLER & RICHARD WILSON, *Conclusion to PARTICLES IN OUR AIR: CONCENTRATIONS AND HEALTH EFFECTS* 212 (John Spengler & Richard Wilson eds., 1996) (mentioning that particulate is associated with 60,000 annual deaths).

248. See Natural Resources Defense Council, *Asthma and Air Pollution*, available at <http://www.nrdc.org/health/effects/asthma.asp> (last visited Feb. 21, 2006) (noting that the U.S. has 20 million asthmatics and that 159 million people live in areas with "bad air"); G.D. Thurston et al., *Summertime Haze Air Pollution and Children with Asthma*, 155 AM. J. RESPIR. CRIT. CARE MED. 654 (1997) (ozone air pollution is consistently correlated with acute exacerbation of asthma); T.J.N. Hiltermann et al., *Effects of Photochemical Air Pollution and Allergen Exposure on Upper Respiratory Tract Inflammation in Asthmatics*, 156 AM. J. RESPIR. CRIT. CARE MED. 1765 (1997) (showing that the combination of ozone and allergens exacerbates asthma).

249. See Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines At or Above 30 Liters/Cylinder, 67 Fed. Reg. 37,548, 37,586 (proposed May 29, 2002) (to be codified at 40 C.F.R. pt. 94). Note that no inventory could be stable because ships move from port to port.

Often, OMB sought significant changes in rules that had little to do with CBA or even the lack of it.²⁵⁰ For example, OMB suggested that the Department of Agriculture reduce indemnity payments designed to encourage owners of deer and elk herds infected with a variant of “mad cow” disease to destroy the sick animals and disinfect the premises.²⁵¹ Since this rule sets a transfer fee, it generates no societal cost (administrative cost aside)²⁵² and the record does not disclose any demand for CBA. Yet, OMB increased risks to public safety by encouraging the Department of Agriculture to lower payments designed to encourage owners to take actions preventing the spread of this disease.²⁵³ OMB’s tendency to disfavor health protective measures even when it has no CBA-based objections to a rule is consistent with OMB’s past practice.²⁵⁴ Some OMB review may not be germane to the question of CBA’s neutrality. But the consistent use of CBA, or the lack of it, to make rules less stringent suggest that CBA performs the function of weakening protection of health, safety, and the environment. It does so not only by demanding frequently impossible quantification, but by creating an ideological justification for wide-ranging review based on policy preferences of OMB economists.

c. Putting this Data in Context

While OMB sought to reduce the benefits and burdens of the rules in this data set, one should put this data set in context. The GAO concluded that the formal review process did not significantly change most of the rules it reviewed from safety, health, and environmental agencies.²⁵⁵ Yet, it significantly changed six of eight rules proposed by

250. This phenomenon has been observed in the operation of Presidential review in previous administrations. See Peter M. Shane, *Political Accountability in a System of Checks and Balances: The Case of Presidential Review of Rulemaking*, 48 ARK. L. REV. 161, 170–71 (1995) (discussing the Council on Competitiveness’s support for gutting operating permit rules under the Clean Air Act).

251. See Chronic Wasting Disease in Cervids; Payment of Indemnity, 67 Fed. Reg. 5925, 5927–28 (Feb. 8, 2002) (to be codified at 9 C.F.R. pt. 55) [hereinafter Cervid Indemnity Payments]; GAO 2003, *supra* note 53, at 139 (OMB suggested that the indemnity be capped at 95% of the animal’s value).

252. See Posner, *supra* note 43, at 1069.

253. Cervid Indemnity Payments, 67 Fed. Reg. at 5927–28. See Jason R. Odesheo, Note, *No-Brainer? The USDA’s Regulatory Response to the Discovery of “Mad Cow” Disease in the United States*, 16 STAN. L. & POL’Y REV. 277, 284, 287, 289 (2005) (discussing human health impacts).

254. See O’Brien, *supra* note 74, at 60 (during the first Bush Administration, OMB review “focused primarily on political and policy issues” and CBA was “rarely mentioned”).

255. GAO 2003, *supra* note 53, at 69 (finding significant changes in 25 of the 85 rules reviewed during the study period).

EPA's office of water, seven of fourteen from EPA's office of air and radiation and one of four rules from its solid waste office.²⁵⁶ So formal OMB review leaves some rules unchanged, but has a disproportionate impact on EPA's most active programs.

While some of the rules left unaffected may be weak or deregulatory, there is at least one case of Dr. Graham's OMB supporting a very stringent rule. EPA finalized standards regulating non-road diesel emissions in June of 2004.²⁵⁷ These standards promise to greatly reduce emissions of nitrogen oxide, sulfur, particulate, and non-methane hydrocarbons.²⁵⁸ Together they address a very significant source of particulate emissions, ground level ozone, acid rain, and hazardous air pollutants (associated with cancer, birth defects and other serious risks).²⁵⁹ EPA estimated that the monetized benefits (which understate total benefits substantially) from this rule would equal approximately \$80 billion per year, whereas monetized costs would equal about \$2 billion per year.²⁶⁰ EPA expected this rule to prevent more than 12,000 premature deaths, 8,900 hospitalizations (mostly asthma related), 15,000 nonfatal heart attacks, and approximately one million days of missed work from respiratory ailments.²⁶¹

EPA involved OMB in a joint effort to create a CBA early in the rulemaking process.²⁶² And EPA reports that OMB was supportive of the agency's proposal. In spite of the great disparity of costs and benefits, there is no evidence that OMB pushed EPA to promulgate a more stringent rule than the rule it ultimately adopted. OMB, however, did use this occasion to try and establish precedent for valuation methodologies that would shrink the dollar value of saving lives in future cost-benefit calculations.²⁶³ Still, this rule shows that OMB will sometimes support strict rules when monetized benefits exceed costs by an enormous margin.

Nevertheless, the data examined above suggest that CBA functions as a one-way ratchet in the formal regulatory review process. This ratchet often weakens regulation (even regulation with favorable cost-

256. *Id.* at 75.

257. Control of Emissions from Nonroad Diesel Engines and Fuel, 69 Fed. Reg. 38,958 (June 29, 2004) (to be codified at 40 CFR pts. 9, 69, 80, 86, 89, 94, 1039, 1048, 1051, 1068).

258. *Id.* at 38,958.

259. *Id.* at 38,962-68 (discussing the health impacts of the regulated diesel emissions in detail).

260. *Id.* at 38,958.

261. *Id.* at 38,958, 38,960; OMB 2004, *supra* note 17, at 108.

262. OMB 2004, *supra* note 17, at 108; GAO 2003, *supra* note 53, at 37.

263. See Laura J. Lowenstein & Richard L. Revesz, *Anti-Regulation Under the Guise of Rational Regulation: The Bush Administration's Approaches to Valuing Human Lives in Environmental Cost-Benefit Analysis*, 34 ENVTL L. REP. 10,954, 10,957 (2004).

benefit ratios) and sometimes stands still, allowing agencies to keep their rules in tact (as in the non-road diesel rule example). But during the period examined, this ratchet never moved in the direction of encouraging more stringent regulation than the agency would adopt on its own, even when benefits far outweighed costs.

2. Prompt Letters

During the second Bush Administration, OMB began issuing "prompt letters," which its press release describes as "encouraging life saving actions by regulators."²⁶⁴ Professor Sunstein, echoing the press release, has cited the use of these letters as evidence that CBA sometimes encourages the "initiation" of regulation, not just its evisceration.²⁶⁵ If the prompt letters came about as a result of CBA and the letters catalyzed fresh environmental, health, or safety regulations, they would constitute evidence of CBA's neutrality.²⁶⁶

While two of the OMB prompt letters rely upon at least a very rough CBA,²⁶⁷ most of the prompt letters sent do not monetize costs and benefits,²⁶⁸ even through a back of the envelope calculation. So, most of

264. Press Release, OMB, OMB Encourages Lifesaving Actions by Regulators, (Sept. 18, 2001), available at <http://www.whitehouse.gov/omb/pubpress/2001-35.html>. These letters carry no particular legal authority, but they can perform a political role in supporting regulation, since OMB represents the White House.

265. See SUNSTEIN, RISK & REASON, *supra* note 3, at 26; Hahn & Sunstein, *supra* note 28, at 1494-95 (describing the prompt letters as "an important way . . . to spur regulation . . . where it will do more good than harm"); Cass R. Sunstein, *The Laws of Fear*, 115 HARV. L. REV. 1119, 1164 (2002) (reviewing PAUL SLOVIC, *THE PERCEPTION OF RISK* (2000)) (describing the prompt letter's purpose as "spurring further regulation") (emphasis added).

266. Cf. John F. Morrall, *Saving Lives: A Review of the Record*, 27 J. RISK & UNCERTAINTY 221, 233 (2003) (citing regulatory opportunities addressed in some of the "prompt letters" as examples of cost effective ideas for "further regulation").

267. See Letter from John D. Graham, OIRA Adm'r, to John Henshaw, Assistant Sec'y of Labor (Sept. 18, 2001), available at http://www.whitehouse.gov/omb/pubpress/osha_prompt_letter.html [hereinafter Defibrillator Letter] (relying on CBA finding that defibrillators in air carriers generated \$25.2 in annual benefits for \$2.4 in annual costs to suggest that defibrillators in the workplace would probably pass a cost-benefit test); Letter from John D. Graham, OIRA Adm'r, to Tommy G. Thompson, Sec'y of Health & Human Servs. (Sept. 18, 2001), available at http://www.whitehouse.gov/omb/pubpress/hhs_prompt_letter.html [hereinafter Transfats Labeling Letter] (providing an estimate of the costs and benefits of labeling requirements for transfats based on the Food and Drug Administrations regulatory impact analysis). See also Letter from John D. Graham, OIRA Adm'r, to Michael P. Jackson, Deputy Sec'y, Dep't of Transp. (Dec. 7, 2001), available at http://www.whitehouse.gov/omb/inforeg/nhtsa_prompt_120701.html [hereinafter Crash Test Letter] (estimating cost of improving vehicles but not monetizing benefits).

268. See Letter from John D. Graham, OIRA Adm'r, to Christine Todd Whitman, EPA Adm'r, (Dec. 4, 2001), available at http://www.whitehouse.gov/omb/inforeg/epa_pm_research_prompt120401.html [hereinafter Particulate Research Letter] (urging EPA to focus its re-

them have nothing to do with CBA. None of the prompt letters addressing environmental, health, and safety regulation sought to initiate fresh regulation.²⁶⁹ One of the letters that uses some CBA simply supports ongoing rulemaking that the FDA had already initiated to label trans fats in foods, as even OMB's press release acknowledges.²⁷⁰ The second letter that relied on back of the envelope CBA did not clearly support any regulation. OMB called on the Occupational Safety and Health Administration (OSHA) to "promote" placement of defibrillators in the work

search on particulate matter on industry research priorities); Letter from John D. Graham, OIRA Adm'r, to Kim T. Nelson, EPA Assistant Adm'r (Mar. 4, 2002), *available at* http://www.whitehouse.gov/omb/inforeg/epa_tri3_prompt030402.html. [hereinafter TRI Letter] (urging EPA to improve the utility of Toxic Release Inventory data in various ways); Letter from John D. Graham, OIRA Adm'r, to Armando Falcon, Jr., Dir., Office of Fed. Hous. Enter. Oversight, *available at* http://www.whitehouse.gov/omb/inforeg/prompt_ofheo052902.html [hereinafter Fannie Mae Letter] (urging imposition of stricter disclosure requirements on Fannie Mae and Freddie Mac without any statements regarding costs and benefits); Letter from John D. Graham, OIRA Adm'r, to Judge Craig Manson, Assistant Sec'y for Fish, Wildlife, & Parks, Dep't of Interior (Aug. 21, 2003), http://www.whitehouse.gov/omb/inforeg/prompt/doi_mapping_prompt.pdf [hereinafter Habitat Mapping Letter] (urging integration of mapping data that might help regulated parties comply with regulations under the Endangered Species Act, with no CBA); Letter from John D. Graham, OIRA Adm'r, to Mary Hutzler, Dir., Office of Integrated Analysis & Forecasting, Energy Info. Admin., U.S. Dep't of Energy (Feb. 24, 2003), http://www.whitehouse.gov/omb/inforeg/prompt-ltr_eia.pdf [hereinafter Energy Forecasting Letter] (raising a concern about modeling assumptions in DOE energy forecasts, without any reference to CBA); Letter from John D. Graham, OIRA Adm'r, to Claude A. Allen, Deputy Sec'y, Dep't of Health & Human Servs., and James R. Mosely, Deputy Sec'y, Dep't of Agric. (May 27, 2003), http://www.whitehouse.gov/omb/inforeg/prompt_dietary_052703.pdf [hereinafter Dietary Guidelines Letter] (urging revisions in dietary guidelines, with no reference to costs and no monetization of benefits); Letter from John D. Graham, OIRA Adm'r, to Mark E. Ray, Office of the Undersec'y for Natural Res. & Env't, U.S. Dep't of Agric. (Nov. 18, 2002), http://www.whitehouse.gov/omb/inforeg/prompt-ltr_env_qual_incent_prog.pdf [hereinafter Agriculture Letter] (urging USDA to target conservation funding at efforts likely to address water quality, air quality, wetlands, and wildlife habitat, with no CBA).

269. Indeed, only one letter appeared on its face to be calling for any fresh regulation. This letter asked the agency overseeing the federal lending agencies, Fannie Mae and Freddie Mac, to subject them to the same mandatory disclosure requirements that apply to private companies. *See* Fannie Mae Letter, *supra* note 268. OMB, in its report to Congress listed a "prompt letter" to EPA on nonroad diesel emissions. *See* OMB, *supra* note 209, at 186. This seems to be either a mistake or an exaggeration. The report lists a prompt letter of June 7, 2002, but OMB's website contains no prompt letter, but instead a press release announcing a joint collaboration on a nonroad diesel rule with EPA. *See* Press Release, EPA, EPA and OMB Working to Speed the Reduction of Pollution from Nonroad Diesel Engines (June 7, 2002), <http://www.whitehouse.gov/omb/inforeg/r-117.pdf> [hereinafter Diesel Press Release]. This document does not suggest that the rule was an OMB initiative.

270. *See* Trans fats Labeling Letter, *supra* note 267 (supporting FDA's proposed rule on trans fats labeling); OMB, *supra* note 264 (characterizing its trans fats prompt letter as urging "acceleration of an ongoing rulemaking"). The Trans fats Labeling Letter did not, however, urge acceleration of FDA rulemaking, but instead urged FDA to "carefully" review public comments and, "if appropriate, proceed to final rulemaking." Trans fats Labeling Letter, *supra* note 267.

place through "information, economic incentives, voluntary agreement" or, last and apparently least, "compulsory regulation."²⁷¹ Thus, OMB did not squarely urge the adoption of a regulation, but mentioned this as a possible response. OSHA responded to this signal by deciding to "promote" defibrillators through an information program encouraging employers to voluntarily place them in a workplace, without requiring them to do so.²⁷² A third letter contains no CBA, but speculates that the benefits of the National Highway Traffic Safety Administration requiring a high speed frontal offset crash test might well substantially outweigh the costs.²⁷³ The letter urging NHTSA to give this rulemaking priority acknowledges that this rule is already on NHTSA's regulatory agenda.²⁷⁴ Hence, this third letter neither initiated a new regulation or regulatory requirement, nor reflected a response to CBA.²⁷⁵

The overwhelming majority of the prompt letters endorsed ongoing agency efforts to improve disclosure and use of information.²⁷⁶ The

271. See Defibrillator Letter, *supra* note 267.

272. Letter from John L. Henshaw, Assistant Sec'y for Occupational Safety and Health, Dep't of Labor, to John D. Graham, OIRA Adm'r (May 4, 2004), http://www.whitehouse.gov/omb/inforeg/prompt/dol_aeds_update.pdf (announcing completion of a flyer on defibrillators and discussing further voluntary efforts); OMB 2004, *supra* note 17, at 113.

273. See Crash Test Letter, *supra* note 267 ("I suspect that the benefits . . . [of a frontal offset crash test] could substantially exceed its costs.").

274. See GAO 2003, *supra* note 53, at 49.

275. Furthermore, this letter hardly signals unequivocal support for offset crash tests. It asks NHTSA to meet a gauntlet of analytical and procedural requirements in developing this rule. It proposes incremental CBA for each regulatory option, consideration of "disbenefits" from side impacts (and other impacts), and burdensome peer review of the CBA. See Crash Test Letter, *supra* note 267. Some evidence exists that NHTSA may have taken the gauntlet more seriously than the equivocal support for an offset crash test. See OMB Watch, *NHTSA Changes Strategy from Safety Features to Crash Prevention*, 5 THE OMB WATCHER No. 15 (2004), available at <http://www.ombwatch.org/article/articleview/2309/1/227> (citing remarks by NHTSA Administrator Jeffrey Runge that suggest an abandonment of the whole idea of further modifications of the design of vehicles to protect occupants from a crash). Furthermore, by 2005, most manufacturers already conducted such a test, because of regulatory requirements abroad. See OMB Watch, *White House Advances Anti-Regulatory Hit List*, 6 THE OMB WATCHER No. 1 (2005), available at <http://www.ombwatch.org/article/articleview/2607/1/311>.

276. See Particulate Research Letter, *supra* note 268 (supporting EPA research aimed at pinpointing sources of health damage from particulate air pollution); Transfats Labeling Letter, *supra* note 267 (supporting FDA proposal to require disclosure of transfats content of food); TRI Letter, *supra* note 268 (urging improvements in Toxic Release Inventory reporting of pollution); Energy Forecasting Letter, *supra* note 268 (urging DOE to change assumptions used in energy use forecasting for transportation in ways that would indicate less of a need for corporate average fuel economy standards); Dietary Guidelines Letter, *supra* note 268 (supporting revisions to information provided consumers about healthy diets); Habitat Mapping Letter, *supra* note 268 (supporting increasing availability of mapping data useful for private compliance with the Endangered Species Act); Fannie Mae Letter, *supra* note 268 (supporting strengthening disclosure requirements applicable to federal agencies making housing loans).

crash test letter was the only one to call on an agency to even continue an ongoing effort to require corporate conduct changes that actually directly reduce risks.²⁷⁷ And no letter urged an agency to make a rule more stringent or to adopt a rule not already on the agency's agenda.

3. Hit Lists

By contrast with the handful of prompt letters seeking to support some ongoing regulatory efforts, OMB has sought nominations of specific regulations that would result in "reductions in regulatory burden."²⁷⁸ By contrast with the paltry number of "prompt letters" ostensibly aimed at enhancing regulatory benefits, the most recent iteration of this nomination process (OMB has done this several times under George W. Bush)²⁷⁹ has produced a list of 189 regulatory reform recommenda-

277. See Crash Test Letter, *supra* note 267.

278. OMB 2004, *supra* note 17, at 58.

279. *Id.* at 150. In 2001 and 2002, OMB's phrased its solicitation for reform recommendations more neutrally than in 2004. See *id.* at 151; Draft Report to Congress on the Costs and Benefits of Federal Regulations, 66 Fed. Reg. 22,041, 22,054 (May 2, 2001) (reforms sought that increase net benefits); GAO 2003, *supra* note 53, at 6 (2002 solicitation asked for not just rescission of rules and modifications, but also new rules). The nomination processes in 2001 and 2002 produced 392 suggestions. OMB 2004, *supra* note 17, at 150–51. In spite of the neutral phrasing, the overwhelming majority of these suggestions appear aimed at reducing regulatory burdens at the expense of public health, safety, and the environment, rather than increasing health, environmental, and safety protection at the expense of regulated parties. In the original batch of 71 nominations in 2001, the anti-regulatory Mercatus Center nominated 44 of the candidate regulations. GAO 2003, *supra* note 53, at 103. Most of the some 300 regulatory reform recommendations made in response to the 2002 solicitation involved rescinding rules or increasing regulatory flexibility, but more than a quarter involved increases of stringency. *Id.* at 109.

OMB's top priority reforms in conduct regulation from the 2001 nominations in health, environmental, and safety area all involved deregulation. See OFFICE OF MANAGEMENT AND BUDGET, MAKING SENSE OF REGULATION: 2001 REPORT TO CONGRESS ON THE COSTS AND BENEFITS OF REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES 65, 68, 71, 72, 89, 91, 92, 94, 95, 100–03, 113, 115–17 (2001), <http://www.whitehouse.gov/omb/inforeg/costbenefitreport.pdf>. Cf. *id.* at 70 (food labeling recommendation given high priority). In response to criticism of the 2001 process, in 2002 OMB had the agencies, rather than OMB, review the nominations that seemed to involve fresh initiatives in order for the agencies to determine priorities. OMB 2003, *supra* note 209, at 21–22. This process produced a little more balance than existed in 2001 or would seem likely from the 2004 process (i.e. some regulatory initiatives mixed in with the large number of deregulatory proposals). See, e.g., *id.* at 26 (salmonella performance standards pursued); OFFICE OF MGMT. & BUDGET, STIMULATING SMARTER REGULATION: SUMMARIES OF PUBLIC SUGGESTIONS FOR REFORM OF REGULATIONS AND GUIDANCE DOCUMENTS 7 (2002), http://www.whitehouse.gov/omb/inforeg/summaries_nominations_final.pdf (showing that this proposal emanated from pro-safety groups and sought to solve an enforcement problem created by a Fifth Circuit judicial decision).

tions, which OMB has directed the agencies to review.²⁸⁰ The sheer number of these anti-regulatory prompts dwarfs the number of somewhat pro-regulatory prompts. The 181 recommendations include ninety-three recommendations for changes in EPA rules, all but two of which came from industry or pro-industry groups.²⁸¹

D. Some Conclusions about Neutrality in Practice

This history shows that when CBA has any impact at all, its proponents within the government almost invariably use it to weaken environmental regulation. With respect to cost-benefit criteria (as contrasted with the "indeterminate position"), this conclusion is way too mild. Cost-benefit tests have not weakened regulation; they have largely stymied it altogether. That conclusion alone is extremely significant, because CBA proponents often advocate its use as a test for government regulation.

With respect to the history of CBA's use without a statutory cost-benefit test being in place, i.e., as a manifestation of the "indeterminate position," weakening regulation remains an extremely frequent outcome and strengthening regulation a very rare anomaly. CBA becomes a second hurdle that regulation must pass after meeting other statutory criteria that usually weed out some candidate regulations. Sometimes regulation passes this test, as the off-road diesel engine rule suggests. But even in those cases, the need to conduct CBA often slows down the rule and ends up increasing environmental harms for that reason. Environmental regulators almost never use CBA to strengthen regulation, to make it stricter than it would otherwise be. With the single exception of lead from small refineries, CBA has functioned as a one-way ratchet, able to stand still to be sure, but only capable of moving in one direction when it does function as a tool having some substantive effect, that of making regulation less stringent. CBA has not been neutral in the sense of having a neutral effect upon regulation.

This conclusion, of course, does not settle the question of whether CBA has a positive value. Some might argue that environmental regulation rarely needs strengthening, so that this lack of neutrality constitutes

280. OMB 2004, *supra* note 17, at 58. OMB has indicated an intention to review "regulatory reform priorities," presumably from among these suggestions, but only after the agencies have devoted resources to reviewing "each" of the 189 suggestions. *Id.*

281. *Id.* at 64-85. The two suggestions that did not come from a pro-industry group came from animal rights groups, which might share an industry interest avoiding animal testing of potential carcinogens. *See id.* at 81-82.

a virtue.²⁸² But most proponents of CBA have portrayed it as a neutral rationalizing reform. Morgenstern's book, for example, argues that economic analysis has decreased the cost and increased the benefits of regulation,²⁸³ which makes CBA appear neutral and clearly beneficial. This claim, however, could be made about any arbitrary change in regulation. All significant changes in regulation either reduce the cost or increase the benefits. Unfortunately, an analyst could state, with equal accuracy, that almost all of the changes Morgenstern discusses reduce the benefits of regulation or increase its cost as the changes that reduced the cost of regulation generally *reduced* its benefits. Furthermore, the change that increased a rule's benefits (acceleration of the lead phase-down) also *increased* the regulated industry's cost.²⁸⁴ CBA's lack of neutrality in practice might not condemn it in the eyes of opponents of government standards, but it calls into question a major argument made on its behalf.

III. IS CBA NEUTRAL IN THEORY?

Even though CBA has proven anti-environmental in practice, it might be neutral in theory. A finding that CBA has functioned in a biased fashion in the regulatory process might reflect the biases of those administering CBA, rather than an inherent feature of CBA.²⁸⁵ If so, those seeking neutrality through CBA may wish to change the people administering CBA, rather than abandon the technique.

The distinction between the indeterminate position and a cost-benefit criterion will prove helpful here as these two ideas about how

282. Harvard Professor (now Supreme Court Justice) Stephen Breyer has argued that agencies suffer from "tunnel vision," which makes them pursue stringent regulation to the point of being counterproductive. See BREYER, *supra* note 6, at 10–11. While Breyer himself suggests that agencies sometimes need to be more stringent, those who agree that detrimental tunnel vision pervades regulatory decisionmaking might think that no spur to stricter regulation is ever needed. *Id.* at 28–29.

283. ECONOMIC ANALYSES AT EPA, *supra* note 51, at 456–59.

284. See MCGARITY, *supra* note 1, at 32 (showing that costs escalate for refiners as limits on lead get tighter). Moreover, nobody needs CBA to identify the opportunities to reduce costs without reducing benefits. These opportunities primarily involve use of emissions trading, which allows polluters to pay others to make extra emission reductions in their stead. See ECONOMIC ANALYSES AT EPA, *supra* note 51, at 458 (listing trading as a cost reducing reform in the leaded gasoline and ozone depletion rules). This trading around of obligations reduces the cost of regulation without reducing benefits when the monitoring is good and the rules prohibit gaming. Cf. David M. Driesen, *Is Emissions Trading an Economic Incentive Program?: Replacing the Command and Control/Economic Incentive Dichotomy*, 55 WASH. & LEE L. REV. 289, 317 n.131 (1998) (trading slowed achievement of the lead rule's goal, partly because of monitoring defects). CBA is neither necessary nor helpful in identifying opportunities to employ emissions trading productively.

285. Cf. Buzbee, *supra* note 13, at 353 (suggesting that CBA empowers economists who are hostile to stringent regulation "by virtue of their training or politics").

CBA should influence decisionmaking have theoretically different effects on regulatory practice. They therefore differ somewhat in their implications for the neutrality of CBA.

A. The Indeterminate Position

The indeterminate position, like any other vague position, influences the decisions to which it applies unpredictably. It may appear to have a neutral effect, because any vapid position seems neutral. Since the indeterminate position does not spell out how administrative agencies should respond to CBA, it does not have a theoretically predictable influence upon substance. Administrators may ignore the analysis, use it to justify more stringent regulation, or use it to justify less stringent regulation.²⁸⁶ In theory, all of these possibilities exist. And they exist regardless of what any particular analysis shows.

The concept of an indeterminate position calls attention to a very basic aspect of the regulatory reform debate that receives insufficient attention. CBA by itself is a type of analysis, not a principle, neutral or otherwise. I have argued elsewhere that regulators should choose the simplest type of analysis that adequately informs correct application of the statutory criterion governing an administrative decision.²⁸⁷ This would imply that government agencies should employ CBA when a cost-benefit criterion governs the decision, but not otherwise. But the main point here is simple: CBA may appear neutral in some respects (because of its lack of content), but it is not a principle.

This apparent neutrality, however, disappears if the effect of devoting resources to the analysis is taken into account. In theory, CBA requires more resources than competing forms of analysis. Health-based regulation, for example, requires assessment of health effects, but often does not require consideration of cost or monetization of benefits. By contrast, technology-based regulation requires the assessment of technological possibilities and their cost. Cost-benefit analysis combines all of the difficulties of both of these forms of analysis and creates an additional complication—it requires quantification of benefits and, whenever possible, the assignment of monetary values to each of those benefits.²⁸⁸

These greater resource requirements point to slower regulation per dollar of government expenditure, thereby decreasing the efficiency of

286. See generally *id.* at 349 (proposals to add CBA would broaden the discretion of administrative agencies).

287. Driesen, *supra* note 5, at 82 (stating that analysis should focus on factors the legal criterion governing a decision make relevant).

288. See Driesen, *supra* note 7, at 10019 n.204.

the standard-setting process. Unless Congress augments resources to carry out regulatory analysis, this inefficiency will delay regulation.²⁸⁹ These delays have two theoretical implications. First, those exposed to hazards must remain exposed longer, and therefore are more likely to suffer death, injuries, or other ill effects that prompt regulatory standards might otherwise help them avoid. Second, delays in standard-setting allow postponement of compliance expenditures and thereby increase the wealth of regulated firms. This outcome favors regulated firms and their customers over those facing hazards the regulations aim to prevent. This delay favors economic values over environmental and health protection. In this sense, the indeterminate position, though apparently vapid in terms of substantive direction, is not neutral in its effect.

B. Cost-Benefit Criteria

A cost-benefit criterion has the same non-neutral effects upon the pace of regulation as the indeterminate position. But it also should influence actual decisions about the stringency of standards in a theoretically predictable way.²⁹⁰ The precise effect, however, depends upon the choice among several possible cost-benefit criteria.

1. The No Excess Cost Requirement

The most common criterion that regulatory reformers recommend stipulates that regulatory costs may not exceed regulatory benefits.²⁹¹ I shall refer to this as the "No Excess Cost Requirement." Sometimes advocates of CBA propose this formulation as a presumption, but at other times they propose it as a more absolute criterion.²⁹² They also sometimes advocate a less demanding variant upon the No Excess Cost Requirement, that costs should not grossly exceed benefits.²⁹³ It will prove useful to analyze a simple No Excess Cost Requirement and then to note how these variants might influence the analysis.

289. Cf. Buzbee, *supra* note 13, at 352–53 (The claim that regulatory reform bills requiring judicially reviewable CBA "would lead to regulatory paralysis" is "surely correct").

290. In practice, this predictability probably does not exist because too many judgment calls are required in estimating benefits. See *id.* at 369–71 (explaining that CBA relies on non-transparent political judgments).

291. See, e.g., Exec. Order No. 12,291, *supra* note 48 (requiring that the costs of regulation not exceed its benefits to the extent permitted by law). The order was signed on February 17, 1981.

292. Hahn & Sunstein, *supra* note 28, at 1498–99 (articulating this position as a presumption).

293. See, e.g., SUNSTEIN, RISK AND REASON, *supra* note 3, at 119–20.

In theory, the No Excess Cost Requirement constitutes a one-way ratchet, systematically reducing the stringency of regulation in all cases where it has any influence at all. To see this, let us assume that an agency estimates that a regulation demanding a fifty percent reduction in some pollutant generates \$1 million in compliance expenditures, but only \$700,000 in benefits. Here the costs exceed the benefits and the No Excess Costs Requirement requires the agency seeing this analysis to reject the regulation demanding a fifty percent reduction. Usually, however, marginal regulatory costs decline rapidly as regulation becomes less stringent.²⁹⁴ Assuming that the marginal value of regulatory benefits remains constant regardless of the degree of stringency, the cost-benefit ratio will improve as the regulation becomes less stringent and get worse as it gets more stringent. This means that even when a proposed regulation flunks this cost-benefit test, a less stringent regulation may well pass. For example, if we assume that a five percent reduction generates \$10,000 in compliance cost and \$100,000 worth of benefits, the agency can promulgate a regulation requiring a five percent reduction, even though it cannot, consistent with the No Excess Cost criterion require fifty percent reduction. Thus, this cost-benefit criterion requires a reduction in stringency.

This cost-benefit criterion, however, never requires an increase in stringency. Continuing with our example, imagine that a forty percent pollution reduction would produce \$500,000 in compliance expenditures and \$600,000 worth of benefits. This produces a more health protective outcome than the five percent reduction. Both the forty percent reduction and the five percent reduction pass this cost-benefit test, for they both generate benefits exceeding cost. The No Excess Cost test, however, offers no guidance on which of these two regulations to choose. It does not tell the regulator to choose the more stringent forty percent reduction option and would not dictate the choice of a more stringent limit under any set of circumstances.

We could refine this requirement to better fit the way some economists think about this, but this refinement would not change the analysis just offered. The refinement would rephrase the No Excess Cost requirement to specify that the marginal cost of the last unit of control cost should not exceed the marginal benefit associated with that unit. This marginal test would usually produce different outcomes than a test predicated upon average costs and benefits, but it would remain true that this cost-benefit criterion acts like a one-way ratchet. Prohibiting the mar-

294. Cf. Cass R. Sunstein, *Paradoxes of the Regulatory State*, 57 U. CHI. L. REV. 407, 416 (1990) (associating increased stringency with increased cost to industry).

ginal cost from exceeding the marginal benefit does not force regulators to seize additional benefits when the marginal control cost proves less than the marginal benefit. Thus, the No Excess Cost Requirement pushes regulation in only one direction, toward lesser stringency, and therefore it clearly does not have a neutral effect.

The other variations on the requirement that costs not exceed benefits described at the beginning of the section do not change this basic finding about CBA's lack of neutrality. The requirement that costs not grossly exceed benefits²⁹⁵ may permit more regulation than the requirement that costs may not exceed benefits at all, but the no gross excess cost requirement (like the No Excess Cost Requirement) only reduces stringency, it never increases it. The requirement that costs must *presumably* not exceed benefits applies in a non-neutral manner to weaken regulation, but it allows the weakening to be overcome in some cases, such as where distributional concerns are especially acute,²⁹⁶ whatever factors overcome the presumption in this case only reduce the number of cases in which the criterion relaxes stringency. But the presumptive test only ameliorates the test's weakening of regulation, it never acts affirmatively to strengthen (i.e., make more stringent) regulation.

Regulatory reformers, including academic reformers who advocate CBA as a neutral principle, often advocate some variant of the No Excess Cost Requirement.²⁹⁷ It is simply wrong to imagine that such a requirement is neutral, even in theory.

This theory does help explain the findings from the history of OMB review mentioned earlier. The Reagan Executive Order has sought to impose a No Excess Cost Requirement to the extent permitted by law.²⁹⁸ This might help explain why OMB so consistently favored weakening environmental regulation in the Reagan Administration, when it significantly affected the outcome of rules. The successor order requires that the benefits justify the cost to the extent permitted by law.²⁹⁹ This test is unclear, but amenable to interpretation as consistent with the No Excess

295. Cf. SHAPIRO & GLICKSMAN, *supra* note 37, at 44 (characterizing the standard governing Consumer Product Safety Commission regulation as requiring a "reasonable relationship between regulatory costs and benefits").

296. See Driesen, *supra* note 5, at 59.

297. See, e.g., Hahn & Sunstein, *supra* note 28, at 1498–99 (regulators should generally explain how a regulation's benefits exceed its costs); SUNSTEIN, RISK AND REASON, *supra* note 3, at 119–20 (stating that courts should generally invalidate regulations generating costs in excess of benefits).

298. Section 2 of Executive Order 12,291 provides that "all agencies, to the extent permitted by law, shall adhere to the following requirements: . . . (b) Regulatory action shall not be undertaken unless the potential benefits to society for the regulation outweigh the potential costs to society." Exec. Order No. 12,291, *supra* note 48, § 2.

299. Exec. Order No. 12,866, *supra* note 54.

Cost Requirement or one of its variants. The case studies provided suggest that George W. Bush's OMB has relied on a No Excess Cost Requirement from the Clinton Executive Order to reject some regulatory requirements.³⁰⁰

2. Cost Equaling Benefit

The regulatory reformers' prescription is not as biased as the economists' concept of optimal pollution (or optimal safety) would be. Economists typically describe optimal pollution as pollution regulated (or taxed) so that the cost of pollution control equals the benefits of regulation.³⁰¹ I will refer to a legal criterion requiring that costs equal benefits as the Optimality Criterion.

The Optimality Criterion appears neutral in one sense. In principal, it could move a regulatory agency either toward more stringent or less stringent regulation than it initially proposed. Returning to our earlier example, neither the five percent reduction nor the fifty percent reduction would satisfy the Optimality Criterion. The five percent reduction flunks because it generates benefits in excess of cost. The fifty percent reduction flunks because it generates costs in excess of benefits. The Optimality Criterion would force the agency to choose an option in between these two.

This conclusion that an optimization criterion could move a regulator toward more stringent or less stringent regulation would not shift if one specified that the benefits and costs should equal each other at the margin. This Optimization Criterion at the margin would still demand less stringent regulation than a regulation generating marginal costs in excess of benefits and more stringent regulation than a regulation generating marginal benefits in excess of marginal costs. Thus, the Optimality Criterion, whether defined at the margin or on average, is not completely one-sided.

On the other hand, the notion of neutral effect in the regulatory reform literature must be understood as a claim about the change cost-benefit analysis produces relative to pre-existing baselines. This optimi-

300. These are the three cases where OMB disagreed with the agency's conclusion that costs exceed benefits. See *supra* notes 227-40 and accompanying text. Recall that in order to reach this conclusion, OMB disagreed with agency analysis positing positive net benefits and that in one of these three cases a court effectively reversed an agency decision predicated on OMB's analysis.

301. See 1 HANDBOOK OF ENVIRONMENTAL ECONOMICS: ENVIRONMENTAL DEGRADATION AND INSTITUTIONAL RESPONSES 253-54 (Karl-Goran Maler & Jeffrey R. Vincent eds., 2003) (defining the "social optimum" regulation or tax as one that equates marginal abatement cost to marginal damage).

zation criterion might not be neutral relative to existing law. Some key provisions of existing statutes require full protection of public health or the environment.³⁰² Relative to such criteria, the optimization criterion constitutes a relaxation of stringency. A regulation that sets costs equal to benefits allows some serious harms to continue unabated. Whenever the cost of reducing a portion of the regulated harm exceeded the monetary value assigned that harm (the benefit of the regulation), the optimality requirement would require that the regulator allow the harm to continue.³⁰³ The optimization criterion contemplates allowing even the death of innocents, if the cost of avoiding those deaths “outweighs” the dollar values economists assign to human life. This optimization criterion would not make regulation that already fully protects human health and the environment more stringent, but it would sometimes make it less stringent, so it is certainly not neutral relative to a health-protective standard.

Most government standard-setting in the environmental and occupational area, however, relies on technology-based approaches that use the capabilities of technology to determine standards. I have elsewhere developed the contours of the “feasibility principle,” which provides a useful heuristic for considering many of these sorts of regulations.³⁰⁴ Statutory provisions embodying the feasibility principle require maximum protection of public health, safety, and the environment, unless expenditures become so great that regulators expect widespread plant shutdowns.³⁰⁵ These provisions strongly encourage agencies to avoid widespread plant shutdowns.³⁰⁶

While the Optimality Criterion is not neutral relative to the feasibility principle, it’s quite different from it, and its direction cannot be predicted solely from theory. A feasibility principle may well demand reductions that would generate costs exceeding benefits, but not produce costs so onerous as to shut down plants. In that case, the Optimality Criterion reduces stringency relative to the feasibility principle. It is possible, however, that some regulations shutting down plants would still produce costs equaling benefits. If this is true, then CBA would produce

302. See, e.g., 42 U.S.C. §§ 7409(b), 7412(f)(2) (2000); *TVA v. Hill*, 437 U.S. 153 (1978). See generally Amy Sinden, *In Defense of Absolutes: Combating the Politics of Power in Environmental Law*, 90 IOWA L. REV. 1405 (2005).

303. See Driesen, *supra* note 15, at 560–63 (explaining this point in detail).

304. See Driesen, *supra* note 5, at 19; see also Sinden, *supra* note 25, at 184–92 (discussing “short-cut” standards, which consider cost without employing CBA).

305. See Driesen, *supra* note 5, at 3.

306. *Id.*

greater stringency than the feasibility principle.³⁰⁷ The Optimality Criterion does not change all outcomes under the feasibility principle in one predictable direction, and therefore might be viewed as somewhat neutral relative to the feasibility principle, at least in theory.³⁰⁸

While the question of whether the optimality principle is neutral in effect may appear complex (at least in theory), it clearly is not value-neutral. This criterion involves a choice favoring economic efficiency over competing views of what constitutes an appropriate criterion for good regulatory decisions. The health-protective statutory provisions favor a value choice that places human health above economic considerations. The feasibility principle gives primacy to health, except where doing so might concentrate economic harms on workers victimized by plant shutdowns.³⁰⁹ It implicitly rejects the notion that marginal differences in prices matter much to human welfare, but accepts the notion that sudden elimination of people's income can provide a detriment comparable in importance to the experience of loss of life or good health.³¹⁰ Thus, selection of the Optimality Criterion involves a non-neutral value choice.

The Optimality Criterion has not figured prominently in the regulatory reform literature, and it has played a minor role in practice. The current Executive Order encourages agencies to "maximize net benefits."³¹¹

307. See Cass R. Sunstein, *Is Cost-Benefit Analysis for Everyone?*, 53 ADMIN. L. REV. 299, 312 (2001) (arguing that a cost-benefit "requirement" might be more protective than a feasibility requirement in cases where the benefits outweighed the costs of shutting down facilities); Adler & Posner, *supra* note 10, at 232-33 (same).

308. Cf. Driesen, *supra* note 5, at 74-75 (pointing out that the notion that CBA would lead regulators to shut plants down appears unlikely).

309. *Id.* at 35-38.

310. *Id.*

311. Exec. Order No. 12,866, *supra* note 54, §1. President Reagan's earlier Executive Order, 12,291, contained similar requirements. To the extent permitted by law, it required agencies to choose "regulatory objectives" that "maximize[d] the net benefits." Exec. Order No. 12,291, *supra* note 48. Cf. Stewart, *supra* note 38, at 42 n.61 (noting that the Executive Order does not explain how to determine "net benefits"). It also generally required agencies to establish regulatory "priorities" maximizing net benefits. *Id.* Some commentators have equated this second statement with an expectation that the stringency of regulation would be set to maximize net benefits. See J. Lon Carlson, John B. Braden, & David W. Martin, *Implications of Executive Order 12,291 for Discretion in Environmental Regulation*, 12 B.C. ENVTL. AFF. L. REV. 313, 319 (1985). Cf. Driesen, *supra* note 7, at 10014 (arguing that priority setting should be defined in terms of the order of regulations and the content of the regulatory agenda, rather than as a decisions about the stringency of a single regulation). Also, when the first President Bush declared a moratorium on new regulation and asked agencies to review existing regulation with an eye toward weakening them, he instructed EPA to maximize net benefits. See Daniel A. Farber, *Revitalizing Regulation*, 91 MICH. L. REV. 1278 (1993) (reviewing DAVID OSBORNE & TED GAEBLER, *REINVENTING GOVERNMENT: HOW THE ENTREPRENEURIAL SPIRIT IS TRANSFORMING THE PUBLIC SECTOR* (1992), and SUSAN ROSE-ACKERMAN, *RETHINKING THE PROGRESSIVE AGENDA: THE REFORM OF THE AMERICAN REGULATORY STATE* (1993)).

John Graham, the current director of the Office of Information and Regulatory Affairs (OIRA) at OMB frequently invokes this principle in support of his opposition to agency rules.³¹² But this criterion, in principle, has some potential to make rules stricter.

The academic literature on net benefit maximization, including an environmental economics textbook, understands this criterion as requiring agencies to set costs equal to benefits at the margin, i.e., to conform to the Optimality Criterion discussed above.³¹³ The Optimality Criterion maximizes net benefits in the following sense: when an agency writes regulations that generate costs exceeding benefits (whether on average or at the margin), it makes the net benefits of regulation negative. Setting costs equal to benefits addresses this problem.

Less obviously, benefits exceeding cost (on average or at the margin) involves an efficiency problem as well.³¹⁴ Economic theory teaches that the economy performs inefficiently when processes impose environmental damages. The damages, or costs, are not taken into account in making production decisions and therefore remain external to the market.³¹⁵ Hence, these processes can generate costs (environmental damages) in excess of benefits. Environmental regulation should cure this problem, thereby improving the efficiency of the economy.

If an agency passes a regulation, but foregoes a potentially available increment in environmental protection, it leaves some pollution unpriced and external to the market, thereby interfering with efficiency.³¹⁶ This might be justified when the cost of making the incremental improvement exceeds the incremental value of the benefit, at least according to eco-

312. See GAO 2003, *supra* note 53, at 42 (OIRA commonly said that it returned rules because the agency had not selected the alternative "that would produce the greatest net benefits" or because of concerns about the agency's analytical approach).

313. See HORST SIEBERT, *ECONOMICS OF THE ENVIRONMENT: THEORY AND POLICY* 65 (5th rev. ed. 1998) (maximum net benefit is reached when marginal abatement costs are set equal to benefits defined as marginal avoided damages); ROSE-ACKERMAN, *supra* note 311, at 18 ("net benefits are maximized . . . where marginal costs equal marginal benefits."). See also MCGARITY, *supra* note 1, at 50, 61 (suggesting an optimality concept of net benefits by equating looking at more stringent options where costs would begin to outweigh benefits with maximizing net benefits). Cf. Jan G. Laitos & Thomas A. Carr, *The Transformation on Public Lands*, 26 *ECOLOGY L.Q.* 140, 223-26 (1999) (suggesting that efficient land allocation involves setting the marginal benefit of one land use equal to the marginal benefit of a competing land use).

314. See Carlson et al., *supra* note 311, at 335 (maximizing net benefits may require more stringent measures).

315. See generally WILLIAM J. BAUMOL & WALLACE E. OATES, *THE THEORY OF ENVIRONMENTAL POLICY: EXTERNALITIES, PUBLIC OUTLAYS, AND THE QUALITY OF LIFE* 16-23 (1975) (discussing types of externalities).

316. Cf. *id.* at 18 (optimal taxes will reduce smoke, but not eliminate this externality).

conomic theory. But where the cost of realizing an additional incremental reduction is less than the incremental benefit, making that additional reduction will improve efficiency. Hence, one might say that making all of the reductions that are available without having costs exceed benefits maximizes the net benefits of regulation by getting as much benefit as possible without excessive cost. This concept of maximizing net benefits equates that criterion with textbook optimal regulation.³¹⁷

This point played a role in the debate over the particulate national ambient air quality standard promulgated in July of 1987. Professor McGarity reports that an OMB staffer, apparently trying honestly to maximize net benefits in the textbook sense, urged EPA to look at more stringent options than those proposed, since all of the proposed options indicated that quantifiable benefits greatly exceeded cost.³¹⁸ A conflict erupted within OMB between the "purists"—those devoted to analysis for its own sake—and the "realists"—those more interested in deregulation.³¹⁹ The realists prevailed and EPA promulgated its proposed option without seriously examining more stringent alternatives than those already on the table.³²⁰

The foregoing discussion shows that CBA is generally not neutral. The forms of CBA most widely touted by regulatory reformers and used or proposed in practice benefit polluters by slowing down regulation and systematically reducing its stringency (where it has any predictable bite at all). On the other hand, a reason for academics to view CBA as neutral does emerge from this discussion. The Optimality Criterion, which has played only a minor role in the regulatory reform literature and in practice but looms large in economic theory, appears neutral in the sense of having some theoretical potential to increase a regulation's stringency.³²¹ But even the neglected Optimality Criterion is not generally neutral in effect, nor is it value neutral.

317. See SIEBERT, *supra* note 313, at 46–48, 65 (equating maximum net benefit with optimal pollution levels).

318. See MCGARITY, *supra* note 1, at 48, 50, 61.

319. *Id.* at 61.

320. *Id.*

321. See ROSE-ACKERMAN, *supra* note 311, at 16–19 (defending CBA for "maximizing net benefits" as defined by the optimality criterion). The Safe Drinking Water Act of 1996 makes some use of an optimality criterion, but uses it as basically a one-way ratchet. If the benefits of the maximum feasible limit would not justify the cost, EPA may promulgate a "maximum contaminant level" (MCL) that "maximizes health risk reduction benefits at a cost that is justified by the benefits." 42 U.S.C. § 300g-1(b)(6) (2000). This approach does not use CBA to justify going beyond feasible limits. Instead, it uses it to constrain the agency from achieving feasible reductions when the benefits do not justify the costs. This might be interpreted as limiting feasible reductions when costs exceed benefits, for example, as an instance of the No Excess Cost Rule. While this language uses CBA as a restraint on stringency and

C. Methodological Bias and the View of CBA as an Objective, Value-Neutral Technique

In the past, opponents of CBA have claimed that the value choices made in choosing methodologies to quantify benefits are anti-environmental.³²² CBA's friends have responded by defending various cost-benefit methodologies.³²³ Even though other literature makes extended discussion of methodological issues unnecessary in this article,³²⁴ the basic implications of this debate for the issue of whether CBA can be neutral are important to this article's goal of exploring the neutrality issue.

Most importantly for this article's purposes, CBA's opponents are surely correct that choices of methodologies inherently involve value choices.³²⁵ Such choices cannot be neutral in the sense of being value-free. Since CBA requires methodologies, it cannot be neutral.

not as a creator of additional stringency, it avoids the excesses of OMB's approach to maximizing net benefits under the Executive Order (assuming that it is implemented properly in spite of OMB). It uses the optimality criterion to limit the damage that cost-benefit considerations might inflict upon drinking water through the directive to maximize risk reduction within a cost-benefit framework. This directive might permit the agency to forego costs that exceed the benefits, but would not justify "maximizing net benefits" by making further reductions in stringency beyond those suggested by an optimality criterion.

322. See Sidney A. Shapiro, *OMB's Dubious Peer Review Procedures*, 34 ENVTL. L. REP. 10064, 10069 (2004) (OMB advises agencies to disqualify scientists who do government-supported research, but not industry supported research).

323. See, e.g., Hahn, *supra* note 246, at 1026–27, 1038–39; Cass R. Sunstein, *Lives, Life-Years and Willingness to Pay*, 104 COLUM. L. REV. 205 (2004); Mathew D. Adler & Eric A. Posner, *Implementing Cost-Benefit Analysis When Preferences are Distorted*, 29 J. LEGAL STUD. 1105, 1116–24 (2000) (defending agency deviation from "textbook CBA").

324. See, e.g., Sunstein, *supra* note 323; ACKERMAN & HEINZERLING, *supra* note 9.

325. For critiques of the value choices involved, see ACKERMAN & HEINZERLING, *supra* note 9; Parker, *supra* note 23, at 1370–75 (critiquing methodologies used to value life and uses of discount rates); McGarity, *supra* note 27, at 2353–54 (discussing EPA's failure to make adjustments to value of deaths to take into account numerous relevant factors, because of lack of adequate data and policy agreement about how to do so); Lisa Heinzerling, *The Rights of Statistical People*, 24 HARV. ENVTL. L. REV. 189 (2000); Amartya Sen, *The Discipline of Cost-Benefit Analysis*, 29 J. LEGAL STUD. 931 (2000); Henry S. Richardson, *The Stupidity of Cost-Benefit Standard*, 29 J. LEGAL STUD. 971 (2000); Richard L. Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 COLUM. L. REV. 941 (1999); Lisa Heinzerling, *Discounting Life*, 108 YALE L.J. 1911 (1999); Lisa Heinzerling, *Discounting Our Future*, 34 LAND & WATER L. REV. 39 (1999); Shapiro & McGarity, *supra* note 24, at 734–35 (criticizing use of "wage premiums" as a basis for dollar estimates of the value of human life and application of discount factors); Thomas O. McGarity, *Media-Quality, Technology, and Cost-Benefit Balancing Strategies for Health and Environmental Regulation*, 46 LAW & CONTEMP. PROBS., Summer 1983, at 159, 171 (arguing that "wage premiums" are not set by willingness to accept risk, but by the unemployment rate and the level of desperation of currently employed workers).

By far, the most important value choice involves the question of whether to use a willingness-to-pay approach or a willingness-to-accept approach when valuing health and environmental benefits.³²⁶ A willingness-to-pay approach estimates the monetary value of an environmental benefit by seeking to figure out how much a potential victim of a hazard is willing to pay to avoid a health and environmental harm.³²⁷ By contrast, a willingness-to-accept approach values environmental benefits by asking how much the perpetrator of a hazard would have to pay a victim to accept a health or environmental harm.³²⁸ The literature recognizes that willingness-to-pay measures provide much lower valuations than willingness-to-accept measures.³²⁹ Regulators have consistently employed a willingness-to-pay approach, thereby producing much lower benefits estimates than a willingness-to-accept approach would generate.³³⁰

Furthermore, economists have generally employed information assumptions that have a huge influence upon the monetization of benefits. Economists seeking to value environmental benefits have not asked how much a polluter must pay a victim of a health hazard to accept a harm. For example, CBA proponents do not ask how much a company would have to pay a victim to get her to agree to die of cancer contracted after breathing in the fumes from the company's plant. Rather, they have asked how much a potential victim would pay the factory to avoid a risk. This choice to abandon a strong perfect information assumption (that the victims of hazards know who they are) also leads to strikingly lower benefits valuations than an approach that employs a variant of neoclassical economics perfect information assumption. This choice of a willing-

326. Driesen, *supra* note 15, at 589-92 (arguing that the use of a willingness-to-pay criterion involves an unjustified hypothetical rights assignment to polluters). See also *id.* at 591 n.200 (addressing a possible counter-argument based on the Coase theorem).

327. See E.J. MISHAN, *ECONOMIC EFFICIENCY AND SOCIAL WELFARE: SELECTED ESSAYS ON FUNDAMENTAL ASPECTS OF THE ECONOMIC THEORY OF SOCIAL WELFARE* 92 (1981); Driesen, *supra* note 15, at 588-89.

328. See E.J. MISHAN, *COST-BENEFIT ANALYSIS* 171 (1982) (discussing the difference between a willingness-to-pay and willingness-to-accept measure of price); Driesen, *supra* note 15, at 589 (describing a valuation measure based on what a citizen "would be willing to accept to allow pollution.").

329. See, e.g., MCGARITY, *supra* note 1, at 148-49.

330. MISHAN, *supra* note 328, at 171 ("[T]he most a person will pay for a good is less than the least sum he would accept to forego it."); Lowenstein & Revesz, *supra* note 263, at 10,958 (explaining that for more than three decades willingness-to-pay has been used as a measure of the social value of regulation); MCGARITY, *supra* note 1, at 149 ("virtually all regulatory analysts adopt the willingness-to-pay criterion . . ."). Lowenstein and Revesz explain, however, that recently the Bush Administration's OMB has pushed for valuation methods that produce even lower benefits estimates than willingness-to-pay. See Lowenstein & Revesz, *supra* note 263, at 10,964-65.

ness-to-pay approach based on imperfect information involves an important pro-industry and anti-environmental value choice.³³¹ It also is strikingly at odds with economic theory, which posits that market exchange is efficient only under conditions of perfect information.³³² Indeed, a philosophically strong case for Kaldor-Hicks efficiency³³³ would seem to require an extreme version of a perfect information assumption, since there is no reason to think that people's voluntary decisions about exchange prove efficient if they do not fully understand the consequences of their decisions.³³⁴

The choice of a discount rate also has an enormous effect upon the calculations of benefits.³³⁵ But this choice amounts to "a value judgment about equity between generations."³³⁶

Also, writers frequently point out that CBA is anti-environmental because it gives short shrift to soft variables.³³⁷ The cases examined in preparing this paper strongly support this point. First of all, in the vast majority of cases, the agency was unable to quantify any of the benefits, for perfectly good reasons. This failure often led to OMB opposition to the rule.

In every case where the agency quantified some benefits, it quantified direct costs, but listed large categories of significant direct environmental benefits that it could not quantify and monetize. While in the abstract OMB recognizes that CBA "can . . . be misleading" when

331. See Driesen, *supra* note 15, at 589–92.

332. See *id.* at 588 ("Economic theory only predicts that a transaction based on perfect information will be allocatively efficient.").

333. A transaction is said to be "Kaldor Hicks efficient" when its benefits suffice to compensate losers. See *id.* at 588; MISHAN, *supra* note 328, at 91; Nicholas Kaldor, *Welfare Propositions of Economic and Inter-personal Comparisons of Utility*, 49 ECON. J. 549 (1939).

334. See Driesen, *supra* note 15 at 588–89 (explaining this in detail).

335. ACKERMAN & HEINZERLING, *supra* note 9, at 179–203 (discussing the discount rate choices and their impact); Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 YALE L.J. 1981, 1984–85 nn.8–10 (1998).

336. See Rodgers, *supra* note 16, at 198. For discussion of these value choices, see Douglas A. Kysar, *Climate Change, Cultural Transformation, and Comprehensive Rationality*, 31 B.C. ENVTL. AFF. L. REV. 555, 578–85 (2004) (discussing the moral issues of discounting in the climate change context); Heinzerling, *supra* note 325; Revesz, *supra* note 325; Daniel A. Farber & Paul A. Hemmings, *The Shadow of the Future: Discount Rates, Later Generations, and the Environment*, 46 VAND. L. REV. 267 (1993). See also Edith Brown Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 ECOLOGY L.Q. 495 (1984).

337. See, e.g., Lisa Heinzerling, *The Clean Air Act and the Constitution*, 20 ST. LOUIS U. PUB. L. REV. 121, 149 (2001) (CBA "tends to underrate those things that cannot be so quantified and monetized"); MCGARITY, *supra* note 1, at 134; Laurence H. Tribe, *Ways Not to Think About Plastic Trees: New Foundations for Environmental Law*, 83 YALE L.J. 1315, 1318–19 & n.25 (1974) (quantitative analysis may squeeze out "soft" but critical information); Laurence H. Tribe, *Policy Science: Analysis or Ideology?*, 2 PHIL. & PUB. AFF. 66 (1972).

important benefits cannot be quantified and monetized,³³⁸ OMB often opposes regulation when monetized costs outweighed monetized benefits (as well as in many cases where monetized benefits exceeded monetized costs). This provides powerful evidence that CBA leads to decisions giving unquantifiable benefits no weight, as its critics have feared. It also means that monetization cannot provide objective guidance to decisions about which regulations to reject, for a responsible regulator figuring out how to respond to CBA always must decide whether the non-quantified benefits justify more stringent regulation. Thus, CBA cannot be neutral because of the limits of monetization and the impossibility of any neutral monetization methods.³³⁹

D. Procedural Neutrality

The beginning of this article suggested that a concept of procedural neutrality might justify CBA. CBA could be conceived of as neutral in the sense that a fair hearing is neutral, a mandate for CBA effectively directs agencies to listen to both sides, considering the costs and benefits.

The idea of a criterion to govern administrative decisions, however, casts doubt on whether the fair hearing concept of procedural neutrality justifies a choice of a cost-benefit criterion over the alternatives. No matter what the legal criteria governing a decision, the decision-maker can listen to both sides. For example, if the feasibility principle governs a rulemaking, agencies can listen to industry claims that a requirement is so expensive that it would put it out of business and to environmentalist claims that a stricter requirement could be imposed without putting anyone out of business. Even a clearly one-sided criterion allows both sides to be heard; it just changes the nature of what they need to say. For example, when Congress decided that national ambient air quality standards should protect the public health with an adequate margin of safety,³⁴⁰ a criterion that excludes cost considerations altogether, it still required EPA to listen to and respond to industry comments.³⁴¹ But this criterion means that effective industry advocates will argue that strict levels of control are not needed to protect public health, thereby focusing the argument on health data, rather than cost. Any legal criterion makes

338. OMB 2003, *supra* note 209, at 127.

339. See, e.g., *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1215 (D.C. Cir. 2004) (agency assumed that time spent resting is as fatiguing as time spent driving in estimating benefits of rules limiting the driving hours of truckers).

340. See 42 U.S.C. § 7409(b)(1) (2000).

341. See 42 U.S.C. §§ 7607(d)(1)(A), (d)(3) (2000).

some arguments more important than others, making some considerations central and others irrelevant.

A cost-benefit criterion may appear to require the agencies to listen to a wider variety of arguments than alternative criteria. But such a criterion does cut off some of what environmentalists would like to say. For example, a cost-benefit criterion makes an argument that a particular level of environmental improvement is needed to protect public health irrelevant. It also makes it much harder to argue for precaution and attention to non-quantifiable harms.

The indeterminate position (that CBA should be considered), however, could be taken as opening up the conversation to all possible considerations and points of view. But this is not because CBA is a more neutral procedure. The procedure can be the same under all of the approaches discussed so far, a duty for the agency to consider written comments usually coupled with the availability of a judicial hearing for the disgruntled. The indeterminate position involves a commitment to infinite agency discretion unguided by a legislative policy choice.³⁴²

This proposal for infinite agency discretion might be conceived of as a form of neutrality—openness to all arguments with no pre-existing legal criteria. If so, it is a type of neutrality going beyond that normally offered by courts, which usually listen to both sides to determine who wins under a policy decision made in prior judicial decisions, in adopting a constitution, or in writing a statute. And this form of “neutrality” involves a commitment to allowing administrative agencies, rather than elected officials assembled in Congress, to make all of the crucial value decisions inherent in policy-making.³⁴³ A subsequent Article will examine the question of whether this sort of neutrality is desirable. For present purposes, it suffices to note that CBA’s tendency to shape debate limits its capacity to act as a neutral procedure.

342. See Buzbee, *supra* note 13, at 358 (CBA gives officials “greater discretionary authority” by allowing them to “consider a virtually unlimited universe of societal costs and benefits”).

343. See *id.* at 362 (CBA-based regulatory reform bills allow Congress to “avoid democratic accountability,” because they only communicate a “legislative mood” rather than “particular guidance” about “outcomes”); Theodore J. Lowi, *Two Roads to Serfdom: Liberalism, Conservatism, and Administrative Power*, 36 AM. U. L. REV. 295, 305–06 (1987) (adding consideration of CBA to a statute to already broad delegations of authority eradicates the boundaries of agency authority).

IV. IMPLICATIONS FOR THE REGULATORY REFORM DEBATE

The debate about the future of government standard setting should address value choices and the nature of the society we live in.³⁴⁴ Unfortunately, CBA has not had a neutral effect. It has thwarted environmental protection completely when embodied in a cost-benefit test and weakened it substantially when introduced as an important consideration. In principle, the most frequently used and advocated versions of cost-benefit tests favor regulated firms and never favor additional protection of safety, health, and the environment.

This finding that CBA is generally anti-environmental will not end the debate about CBA's value. It should, however, lead to some rethinking of the debate.

Advocates of CBA as a neutral rationalizing reform should oppose tests, like the test that costs should not exceed benefits, that operate in theory as a one-way ratchet, only reducing stringency and never increasing it. Such a test does not solve the problem they claim that regulation poses: overly stringent regulation in some cases and too little regulation in others.³⁴⁵ It simply reduces the stringency of some regulation.

Those who view CBA as advancing "overall well being"³⁴⁶ or optimality, however, can still argue that either an optimality test or the indeterminate position might advance their goals. The empirical data presented, though, casts doubt on the idea that CBA leads to better regulation. The case studies show that in practice OMB often rejects regulation that passes a cost-benefit test. Also, OMB often favored less stringent regulation even when no CBA had been performed to justify a conclusion that it was sub-optimal. Finally, OMB never used evidence that a regulation was insufficiently stringent to meet an optimality criterion to urge more stringent regulation than the agency had proposed. These findings suggest that CBA does not subject regulation to an optimality test, but instead provides an ideological justification for very free-ranging opposition to environmental, health, and safety standards.

The lead case, of course, may cause some to conclude that the problem lies with OMB, rather than CBA. After all, when OMB was not involved, EPA did find CBA helpful in recognizing an opportunity for continuing its phase-down of lead from small refineries. This might suggest

344. See generally DAVID M. DRIESEN, *THE ECONOMIC DYNAMICS OF ENVIRONMENTAL LAW* 123–35 (2003) (explaining that fundamental facts about the shape of environmental problems and economic dynamics should influence environmental policy).

345. See, e.g., SUNSTEIN, *supra* note 2, at 4–6. Accord BREYER, *supra* note 6.

346. See Adler & Posner, *supra* note 10 (discussing the difference between the two concepts and advocating overall well-being as the test).

that we should abolish OMB's regulatory function, but continue with administrative agency CBA. A more modest suggestion would involve confining OMB review to economically significant rules, those costing \$100 million a year or more. The data presented here suggest that OMB acts as a general drag on government standard-setting even when little is at stake economically.³⁴⁷

But the data suggest some problems with the conclusion that agencies should conduct CBA, even freed (completely or partially) from OMB oversight. First, the early history of the lead case suggests that cost-benefit tests can foil the most valuable regulation, regulation that responds to serious health problems before the damage to people provides sufficient data to quantify the problem's magnitude. Second, the data suggests that the widely recognized problem of unquantifiable benefits is pervasive. In most cases, the agency could not quantify any of the rule's benefits, for understandable reasons that did not call into question the existence of substantial benefits. Every completed CBA listed many of the proposal's potential benefits, often the most important benefits the rule offered, as non-quantifiable. Thoughtful CBA advocates favor considering non-quantified benefits, but have not explained how agencies can integrate them into a cost-benefit framework.³⁴⁸ Third, if the only case where CBA favored additional regulation involves a situation where the economic benefits were positive, perhaps we should just conduct studies of economic costs and benefits, and spare regulators the difficulty of seeking to quantify and monetize environmental and health effects.

Ronnie Levin, the author of the case study on lead in drinking water, explains that usually the inability to quantify important benefits constrains CBA's utility.³⁴⁹ When monetized benefits are less than monetized costs, she notes, one cannot draw conclusions about whether or not total net benefits are positive.³⁵⁰ For one cannot tell whether the unmonetized benefits would tip the balance in the regulation's favor. Under these circumstances, a conclusion that the monetized costs outweigh the environmental benefits cannot objectively justify weakening a regulation.

On the other hand, when the monetized benefits outweigh the cost, one can tell that the regulation offers positive net benefits. But one can-

347. Cf. Peter L. Strauss & Cass R. Sunstein, *The Role of the President and OMB in Informal Rulemaking*, 38 ADMIN. L. REV. 181, 193 (1986) (suggesting that OMB ought not to duplicate agency work or operate as "a *de novo* decisionmaker").

348. See Driesen, *supra* note 15, at 594-601 (explaining that regulators under a cost-benefit framework systematically diverge from consumer valuations under conditions of uncertainty).

349. *Id.*

350. *Id.*

not tell how much stricter the regulation needs to be to meet an optimality criteria, because one cannot determine the magnitude of unquantifiable benefits.

The economist Robert Hahn's statement that most regulation could not pass "a neutral economist's benefit-cost test"³⁵¹ articulates a central tenet of regulatory reformers. While the statement appears utterly damning, it is profoundly misleading. First, in the face of any environmental regulation with significant non-quantified benefits an objective economist would concede that he did not know whether or not the regulation passed a cost-benefit test. Second, there is no such thing as an objective cost-benefit test. A cost-benefit test embodies the value judgments made, explicitly or implicitly, in constructing its methodology. The central lesson here is that responsible scholars cannot reach conclusions about the success or failures of regulations without explicitly taking available data about unquantified benefits into account.

Of course, some may view agencies as so radically prone toward stringent regulation that a one-way ratchet is a good idea. But legal scholars supporting CBA have not made this argument. Instead, they have argued that regulation sometimes needs to be stricter. It seems unlikely that a system that only constrains environmental regulation and almost never increases its scope and stringency would improve society's well-being.

CONCLUSION

The lawyers representing environmental organizations and regulated firms got it right: CBA is not neutral in practice and is, in many ways, anti-environmental in theory. That finding cannot end the debate about regulatory reform. But the argument that CBA is a neutral rationalizing reform that all should favor as a "pragmatic" measure ignores most of the relevant theory and nearly all of the relevant history. That sort of argument should be laid to rest.

351. See HAHN, *supra* note 11, at 5.

APPENDIX***Rules in Which OMB Sought Significant Changes During Formal Reviews Between June of 2001 and July of 2002***

Chronic Wasting Disease in Cervids: Indemnity Payment (Department of Agriculture)

Foot and Mouth Disease: Indemnity Payments (Department of Agriculture)

Tire Pressure Monitoring Systems (National Highway Transportation Safety Administration)³⁵²

Control of Emissions from Nonroad Large Spark-Ignition Engines and Recreational Engines (EPA)

Consolidated Emissions Reporting Rule (EPA)

National Emissions Standards for Hazardous Air Pollutants: Surface Coating for Wood Building Products (EPA)

Proposed Compliance Program Fees for Light-Duty Vehicles & Engines; Heavy Duty Vehicles & Engine; & Nonroad Engines & Motorcycles (EPA)

Proposed Nonperformance Penalties for 2004 and Later Model Year Emission Standards for Heavy-Duty Diesel Engines & Heavy-Duty Vehicles (EPA)

Control of Emissions from Spark Ignition Marine Vessels and Highway Motorcycles (EPA)

352. This rule was subject to two formal reviews during this period. The twenty-five cases involve twenty-five reviews. *See* GAO 2003, *supra* note 53, at 69 n.1 (explaining that the GAO uses the term “rules” to refer to submissions under the Executive Orders and that OIRA reviewed some rules more than once). OMB also reviewed the Part 145 Review: Repair Stations Rule twice during this period. *See id.* at 178, 186

Control of Emissions of Air Pollution From New Marine Compression Ignition Engines at or Above 30 liters/Cylinder (EPA)

Identification & Listing of Hazardous Waste; Addition of Manganese to Appendix VIII; Inorganic Chem. Man. Waste; & CERCLA Hazardous Substance Designations & Reportable Quantities (EPA)

Minimizing Adverse Environmental Impact from Cooling Water Intake Structures at New Facilities Under Section 316(b) of the Clean Water Act, Phase I (EPA)

National Point Discharge Effluent Standards: Proposed Regulations to Establish Requirements for Large Cooling Water Intake Structure at Existing Power Generating Facilities (EPA)

National Primary Drinking Water Regulations: Long-Term Enhanced Surface Treatment Rule (EPA)

Revisions to the Clean Water Act Regulatory Definition of "Fill Material" and Discharge of "Fill Material" [The Mountaintop Mining Rule] (EPA)

Effluent Limitation Guidelines and New Source Performance Standards for the Construction and Development Category (EPA)

Effluent Limitation Guidelines, Pretreatment Standards, and NSPS for the Iron & Steel Man. Point Source Category (EPA)

Part 145 Review: Repair Stations (FAA)

Certification of Pilots, Aircraft, and Repairmen for the Operation of Light Sport Aircraft (FAA)

Corrosion Control Plan (FAA)

Aging Airplane Safety (FAA)

Revision of Digital Flight Data Recorder Regulations for Boeing 737 Airplanes for Part 125 Operations (FAA)

Federal Water Quality Standards for Indian Country and Other Provisions Regarding Federal Water Quality Standards (EPA)