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## Is Cost-Benefit Analysis Neutral?

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IS COST-BENEFIT ANALYSIS NEUTRAL?

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## IS COST-BENEFIT ANALYSIS NEUTRAL?

### ABSTRACT

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 health, safety and environmental protection. It also addresses the question of whether CBA offers either an objective value-neutral method or procedural neutrality.

This Article shows that CBA has almost always proven anti-environmental in practice and that, in many ways, it is anti-environmental in theory. It examines the practice of the Bush Administration using a representative data set and shows that Office of Management and Budget review produced numerous anti-environmental, health, and safety changes and no pro-protection changes in the rules in the data set. It also reviews “prompt letters,” which CBA proponents cite as examples of CBA producing more regulation, rather than less. These letters have never prompted any fresh regulatory action and rarely have any basis in CBA. Finally, this article shows that the anecdotal information relied upon to show that CBA sometimes has strengthened rules prior to the Bush Administration provides little or no support for the view that CBA has a neutral effect.

The most common legal formulation of a cost-benefit test, that the costs should not exceed the benefits of regulation, acts a one-way ratchet, demanding that some regulations become less stringent, but never demanding greater protection of health, safety, or the environment. Nevertheless, one can discern some reasons why some analysts look at CBA as neutral in the apparent even-handedness of the optimality criterion, which has more influence in the academy than in practice. Even this criterion, however, does not act neutrally relative to all existing alternative criteria. Furthermore, the value choices in choosing methods for quantifying benefits make objective value neutral CBA a theoretical impossibility.

IS COST-BENEFIT ANALYSIS NEUTRAL?

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## IS COST-BENEFIT ANALYSIS NEUTRAL?

## INTRODUCTION

Environmentalists generally oppose cost-benefit analysis (CBA) and regulated industry generally supports it.<sup>1</sup> 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 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."<sup>2</sup> He portrays CBA as sometimes making regulation more stringent and sometimes making it less stringent, suggesting that its net effect might be neutral.<sup>3</sup> 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.<sup>4</sup> Indeed, CBA seems to offer precisely what

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<sup>1</sup> THOMAS O. MCGARITY, REINVENTING RATIONALITY: THE ROLE OF REGULATORY ANALYSIS IN THE FEDERAL BUREAUCRACY 149-150 (1991) ("regulatees" support CBA, but "regulatory beneficiaries uniformly oppose it."). See Barton H. Thompson, *What Good is Economics*, 37 U.C. DAVIS L. REV. 175, 179 (2003) ("opponents of government regulation" have been CBA's "principal proponents"); 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*, 23 BOST. COLL. ENV'T AFF. L. REV. 733, 747 (1996) (CBA has been a "tactical favorite" of anti-regulatory lobbyists).

<sup>2</sup> See CASS R. SUNSTEIN, THE COST-BENEFIT STATE 137 (2002).

<sup>3</sup> 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 rapid and stringent regulation"); CASS R. SUNSTEIN, RISK AND REASON: SAFETY, LAW, AND THE ENVIRONMENT 26-27 (2002) (citing examples of CBA causing "more rapid and stringent regulation.").

<sup>4</sup> See FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING 35 (2004) ("cost-benefit analysis presents itself as the soul of rationality, an impartial, objective standard for making good decisions."). See, e.g., Katherine Q. Seelye, *Bush Nominates Utah Governor to Lead Environmental Agency: Industry Pleased; Conservationists' Views Mixed*, N.Y. TIMES A1 (August 12, 2003) (Mike Leavitt, Bush's nominee to head EPA, has an environmental philosophy "based on balance").

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 look like a neutral decision-making procedure.<sup>5</sup> 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.<sup>6</sup>

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 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.<sup>7</sup> 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.<sup>8</sup> And both its opponents and supporters agree that CBA's fate will significantly influence the future of environmental, health, and safety regulation.<sup>9</sup>

This article will examine CBA's neutrality 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

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<sup>5</sup> 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.")

<sup>6</sup> See Herbert Wechsler, *Toward Neutral Principles of Constitutional Law*, 73 HARV. L. REV. 1 (1959). See, e.g., 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].

<sup>7</sup> See, e.g., Sunstein, note 2, at 6-7 (characterizing CBA as a device to spur "obviously" undesirable regulations while deterring obviously desirable regulations).

<sup>8</sup> See William W. Buzbee, *Regulatory Reform or Statutory Muddle: The "Legislative Mirage" of Single Statute Regulatory Reform*, 5 N.Y.U. ENV'T'L L. J. 298, 348-49 (1996) (while regulatory reform proponents assume that agencies "produce excessive regulation," they "spoke of the need for better . . . regulation.")

<sup>9</sup> See ACKERMAN & HEINZERLING, *supra* note 4, 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).

sometimes less stringent suggests that CBA has a neutral effect. 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 or feasible with existing technology.<sup>10</sup> Proposals based on a feasibility principle are unlikely to be draconian, because they reflect consideration of cost and a preference for avoiding plant shutdowns.<sup>11</sup> This article will compare the effect of a proposal under existing statutory criterion 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. For 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 some regulation needs strengthening and some needs weakening, so that greater consistency can arise.<sup>12</sup> They characterize the needed reform, not as weakening environmental protection, but as improving priority setting.<sup>13</sup> 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

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<sup>10</sup> See Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental law*, 37 STAN. L. REV. 1333, 1334-35 (1985) (characterizing the existing system as based primarily upon requiring the best available technology).

<sup>11</sup> 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. ENVT'L AFF. L. REV. 1, 9-16 (2005) (explaining how the feasibility principle constrains stringency).

<sup>12</sup> See, e.g., Cass Sunstein, *Legislative Foreword: Congress, Constitutional Moments, and the Cost Benefit State*, 48 STAN. L. REV. 247, 257-260 (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).

<sup>13</sup> See Sunstein, *supra* note 12, at 257-260 (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 ENVT'L L. REP. (Env'tl. L. Inst.) 10003(2001).

neutrality, offering a neutral procedure for developing regulation analogous to a hearing.<sup>14</sup>

Part one will explain 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. It asks 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 does, 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.

### 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.<sup>15</sup> CBA contemplates quantification of the averted harms,

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<sup>14</sup> 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.

<sup>15</sup> 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).

including deaths, illness, and ecological destruction, in dollar terms.<sup>16</sup> CBA advocates claim that this is often possible, but concede that regulators cannot quantify many relevant environmental and health effects.<sup>17</sup>

To estimate the cost of a regulation for purposes of CBA, the analyst must engage in 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.<sup>18</sup> Market data generally enables regulators to estimate the direct cost of the technological improvements they envision.<sup>19</sup> These estimates, however, usually prove too high.<sup>20</sup>

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

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<sup>16</sup> William H. Rodgers, *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).

<sup>17</sup> See, e.g., OFFICE OF MANAGEMENT AND BUDGET, OFFICE OF INFORMATION AND REGULATORY AFFAIRS, 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 13 (2004) [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 12 (“quantification will be . . . impossible in some cases.”).

<sup>18</sup> See Driesen, *supra* note 11, at 49-50.

<sup>19</sup> 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.*

<sup>20</sup> See *id.* at 1998 (*ex ante* cost estimates have been higher than actual costs incurred, sometimes by orders of magnitude); Winston Harrington, Richard D. Morgenstern, and Peter Nelson, *On the Accuracy of Regulatory Cost Estimates*, 19 J. POL’Y ANALYSIS AND MANAGEMENT 297 (2000). Cf. OMB 2004, *supra* note 17, at 50-53 (claiming that some studies find that indirect cost exceed the estimated costs, which are often limited to direct costs).

<sup>21</sup> Compare McGarity and Ruttenberg, *supra* note 19, at 2055 (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 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

This assessment requires two extraordinarily difficult steps, first a quantitative risk assessment and then monetization of the benefits described.<sup>22</sup> 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.<sup>23</sup> 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

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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. OFFICE OF THE SCIENCE ADVISOR STAFF PAPER, RISK ASSESSMENT PRINCIPLES & PRACTICES (EPA/100/B-04/001) 11 (2004) [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 fact of uncertainty. *See, e.g.,* Matthew D. Adler, *Against Individual Risk: A Sympathetic Critique of Risk Assessment*, U. of Penn. Inst. for Law and Economics Research Paper 04-01 (2004). But EPA has cautioned that such assessments do not offer panaceas, because they often consume huge resources, only occasionally add value to the decision-making process, and will only prove as accurate as the data underlying them. EPA Staff Paper, 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.

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

<sup>23</sup> *See, e.g.,* OMB 2004, *supra* note 17, at 18 (2004) (discussing major benefits that were not quantified from reducing water pollution from animal feeding operations); Richard W. Parker, *Grading 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).

laboratory tests on other species or from human experience with much larger doses than those that the rules under consideration address.<sup>24</sup>

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.<sup>25</sup>

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 decision-making.<sup>26</sup> But many important environmental, health, and safety effects cannot be quantified at all, so CBA of environmental, health, and safety decisions typically includes a

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<sup>24</sup> 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 Parker, *supra* note 23, at 1411 (pointing out that the range of uncertainty frequently would "vitiolate the relevance of numerical ranges"); 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); Wendy E. Wagner, *The Science Charade in Toxic Risk Regulation*, 95 COLUM. L. REV. 1613, 1625 (1995) (discussing the problem of extrapolating human health effects from high dose animal experiments); 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"); Donald T. Hornstein, *Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV. 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); Sidney A. Shapiro & Thomas O. McGarity, *Not so Paradoxical: The Rationale for Technology-Based Regulation*, 1991 DUKE L. J. 729, 732-33 n. 21 (discussing the data and uncertainties underlying regulation of vinyl chloride).

<sup>25</sup> See Amy Sinden, *The Economics of Endangered Species: Why Less is More in the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENV'T L. REV. 129, 180-183 (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.

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

long list of benefits that could not be quantified, many of which are significant in the view of experts in the area.<sup>27</sup>

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.<sup>28</sup> This position does not tell us how regulators should respond to CBA.<sup>29</sup> 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.<sup>30</sup> 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.

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<sup>27</sup> 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, *Arithmetic*, *supra* note 3, at 2274 (same)

<sup>28</sup> See Driesen, *supra* note 11, at 48 (explaining why a requirement to consider CBA is indeterminate). See, e.g., Robert W. Hahn & Cass R. Sunstein, *A New Executive Order for Improving Federal Regulation? Deeper and Wider Cost-Benefit Analysis*, 150 PENN. L. REV. 1489, 1498 (2002) (CBA is a tool and a procedure not a rigid formula to determine outcomes); Adler & Posner, *supra* note 5, at 195 (describing CBA as a “decision procedure” not as a criterion).

<sup>29</sup> See *Chemical Mfrs. Ass’n v. EPA*, 870 F.2d 177, 204 (5th Cir. 1989) (explaining that requirement that agency consider costs and benefits did not yield any particular test); Driesen, *supra* note 11, at 48.

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

### 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.<sup>31</sup> Many of these statutes seek to accomplish this through a combination of health-based (or, more broadly, effects-based) standards and technology-based standards.<sup>32</sup> Health-based standard setting provisions require regulators to set pollution levels that protect public health or the environment.<sup>33</sup> Technology-based regulations require regulators to match pollution levels to the capabilities of technologies that can reduce pollution.<sup>34</sup> A few of the health-based standard setting provisions forbid the consideration of cost, and the others relegate cost to a distinctly subsidiary role.<sup>35</sup> The technology-based provisions require the consideration of cost, but do not contemplate balancing costs against monetized benefits. Instead, government agencies sometimes examine costs to determine whether achievement of a proposed standard is feasible, a process which only requires the comparison of costs to the economic capabilities of facilities.<sup>36</sup> Alternatively, (or as a

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

<sup>32</sup> See Buzbee, *supra* note 8, at 327 (most statutes require examination of technological capabilities, health impacts, or some combination of the two). See e.g., *Whitman v. American Trucking Ass'ns*, 531 U.S. 457, 464-71 (2001) (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, 489-90 n. 13 (2004) (describing a requirement that polluters employ the technology that "best reduces pollution within practical constraints").

<sup>33</sup> See, e.g., *Whitman*, 531 U.S. at 456 (discussing the health-based provision governing ambient air quality standards).

<sup>34</sup> See, e.g., *Alaska DEC*, 540 U.S. at 489-90 n. 13.

<sup>35</sup> See *Whitman*, 531 U.S. at 464-71 (EPA may not consider cost in setting national ambient air quality standards to protect public health); *Natural Resources Defense Council 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).

<sup>36</sup> See, e.g., *Alaska Department of Environmental Conservation*, 540 U.S. 461, 496-501 (2004); *National Wildlife Federation 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); *CPC Int'l, Inc. v. Train*, 540 F.2d 1329, 1341 (8<sup>th</sup> Cir. 1976) (CBA not required for technology-based decisions under the Clean Water Act); *Kennecott v. EPA*, 780 F.2d 445, 456 (4<sup>th</sup> Cir. 1985); *American Iron & Steel Inst. v. OSHA*, 577 F.2d 825, 836-37 (3<sup>rd</sup> 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);

supplement) agencies implementing some technology-based provisions agencies may engage in a rough form of balancing that does not involve CBA, because it does not involve quantitative risk assessment or monetization.<sup>37</sup> This balancing relies upon marginal cost effectiveness analysis.<sup>38</sup> 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.<sup>39</sup> 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.<sup>40</sup> But it avoids the complications inherent in quantifying and monetizing environmental and health effects.<sup>41</sup> 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 benefits to compare

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National Renderers, 541 F.2d at 1289 (EPA erred in failing to compare costs to income to measure economic viability); *United Steelworkers of America v. Marshall*, 647 F.2d 1189, 1265 (D.C. Cir. 1989) (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. . .”).

<sup>37</sup> See SIDNEY A. SHAPIRO & ROBERT L. GLICKSMAN, *RISK REGULATION AT RISK: RESTORING A PRAGMATIC APPROACH* 37-39 (2003).

<sup>38</sup> See, e.g., Richard B. Stewart, *A New Generation of Environmental Regulation*, 29 CAP. U. L. REV. 21, 41 (contrasting cost effectiveness analysis with CBA); Robert W. Hahn *et al.*, *Empirical Analysis: Assessing Regulatory Impact Analysis: The Failure of Agencies to Comply with Executive Order 12866*, 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 ENV'T'L. L. & POL. 89, 93 (2000-2001) (cost effectiveness analysis is used instead of cost-benefit analysis for many applications in public health and medicine).

<sup>39</sup> 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).

<sup>40</sup> See MCGARITY, *supra* note 1, at 32 (explaining that EPA felt that it was “in the right ballpark” in imposing costs of \$11,654/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).

<sup>41</sup> See Driesen, *supra* note 11, at 3.

them to costs.<sup>42</sup> This distinction between marginal cost effectiveness analysis and CBA will prove important to the analysis of the history of CBA's use.<sup>43</sup>

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

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

<sup>43</sup> 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).

<sup>44</sup> 15 U.S.C. §§ 2601-2692.

<sup>45</sup> 7 U.S.C. §§ 136-136y.

<sup>46</sup> See *Headwaters, Inc. v. Talent Irrigation District*, 243 F.3d 256, 532 (9<sup>th</sup> Cir. 2001); *Save our Ecosystems v. Clark*, 747 F.2d 1240, 1248 (9<sup>th</sup> Cir. 1984); *Environmental Defense Fund 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, *Fuzzy Math*, *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. 1513 (codified in scattered section of 7 U.S.C.).

<sup>47</sup> 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 amendments); Jason Scott Johnston, *A Game Theoretic Analysis of Alternative Institutions for Regulatory Cost-Benefit Analysis*, 150 U. PENN. L. REV. 1343, 1393 (2002) (explaining the SDWA's hybrid test).

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

The OMB, which mostly employs economists, oversees implementation of the executive order.<sup>52</sup> The tension between the economic efficiency ideals animating the executive orders and the Unfunded Mandates Act on the one hand, and the health and environmental protection goals of the statutes not calling for CBA on the other, has

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<sup>48</sup> Exec. Order 12,291, §§ 2, 3, 3 C.F.R. part 127 (1982), *reprinted in* 5 U.S.C. § 601 note (1988) [hereinafter E.O. 12,291].

<sup>49</sup> See Alan 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).

<sup>50</sup> E.O. No. 12, 291 (preamble). The preamble also announces some more neutral purposes, namely increasing agency accountability, providing Presidential oversight, minimizing conflict and duplication, and insuring 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 ENV’T L.L. REP. (Env’t L. Inst.) 10017, 10018 (1987) (an anti-regulatory philosophy inspired the Reagan executive orders, rather than a “concern for improving the regulatory process.”)

<sup>51</sup> Pub. L. No. 104-4, § 202(a), 109 Stat. 64, codified at 2 U.S.C. § 1532.

<sup>52</sup> See UNITED STATES GENERAL 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. 15014, 15021-22 (juxtaposing a few recent science hires with “OIRA’s historical staffing strengths in economics, policy analysis, statistics and law.”)

produced a history of negotiation between OMB and regulatory agencies about the content of regulations.<sup>53</sup> Experience under the executive orders outside the FIFRA and TSCA context offers an understanding of the history of the indeterminate position's application.<sup>54</sup>

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 come primarily from examination of OMB supervision of agency administration of the other health, safety, and environmental statutes, such as the Clean Air Act (CAA),<sup>55</sup> the Federal Water Pollution Control Act (FWPCA),<sup>56</sup> the

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<sup>53</sup> See Kathleen 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 new drug applications); 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 agencies interactions with the public and one of its interactions with OMB).

<sup>54</sup> See Buzbee, *supra* note 8, at 329-342 (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 E.O. 12291, §§ 2, 3(a), 6(a), 7(e); Exec. Order 12498, § 4, 3 C.F.R. 323 (1985), reprinted in 5 U.S.C. § 601 note (1988). 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 lead 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 8, 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 does conflict with the executive order.

<sup>55</sup> 42 U.S.C. §§ 7401-7671q.

<sup>56</sup> 33 U.S.C. §§ 1251-1387. I will refer to this statute by its more colloquial name, the Clean Water Act.

Resources Conservation and Recovery Act (RCRA)<sup>57</sup>, and the Occupational Safety and Health Act (OSHA)<sup>58</sup>.

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.<sup>59</sup> 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.<sup>60</sup> The case cementing this interpretation, *Corrosion Proof Fittings v. EPA*,<sup>61</sup> rejected an EPA ban of asbestos, arrived at after more than a decade of study<sup>62</sup>. Asbestos produced some of the most easily understood and significant public health damage 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.<sup>63</sup> Asbestos destroyed the health of so many workers that damages paid out after tort suits addressing asbestos exposure bankrupted the asbestos industry.<sup>64</sup> Still, EPA lacked sufficient data to fully quantify asbestosis' health effects;<sup>65</sup> 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 weight.<sup>66</sup> The court also took issue with some of the controversial

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<sup>57</sup> 42 U.S.C. §§ 9601-9675.

<sup>58</sup> 29 U.S.C. § 651 *et seq.*

<sup>59</sup> See McGarity, *supra* note 27, at 2343 (the process of CBA has “thoroughly stymied government action under” TSCA and FIFRA).

<sup>60</sup> See *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201 (5<sup>th</sup> Cir. 1991) (interpreting the toxic substances control act as requiring a cost-benefit approach to limiting toxic substances);

<sup>61</sup> 947 F.2d 1201 (5<sup>th</sup> Cir. 1991).

<sup>62</sup> Driesen, *supra* note 15, at 602-03.

<sup>63</sup> *Id.* at 603.

<sup>64</sup> *Id.* at 596.

<sup>65</sup> *Id.* at 597 n. 226.

<sup>66</sup> *Corrosion Proof Fittings*, 974 F.2d at 1219 “unquantified benefits . . . cannot . . . be used to effect a wholesale shift in the balance beam.”).

judgments EPA had to make to quantify costs and benefits.<sup>67</sup> 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.<sup>68</sup> 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.<sup>69</sup> Nobody disputes the view that the cost-benefit criterion under these statutory provisions has largely stymied regulation.<sup>70</sup>

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.<sup>71</sup> They also agree that OMB often does

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<sup>67</sup> Id. at 1218-19 (taking issue with EPA's approach to discounting, its decision to limit the time period for quantifying benefits, its "reliance upon . . . population exposure.")

<sup>68</sup> ECONOMIC ANALYSIS AT EPA 199 (Richard D. Morgenstern, ed. 1997) (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.

<sup>69</sup> See Johnston, *supra* note 47, at 1392 (EPA had reregistered only 2 of 19,000 older pesticides by 1992, because of intense industry pressure); Donald Hornstein, *Lessons from Pesticide Regulation on the Paradigms and Politics of Environmental Law Reform*, 10 YALE J. ON REG. 369, 436-37 & n. 395 (1993).

<sup>70</sup> 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 conclude 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.

<sup>71</sup> See, e.g., Morgenstern, *supra* note 68, at 458 (citing examples of "improvements leading to decreased costs" consisting of 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. & LIT. 51, 72-101 (1993) (presenting case studies); Erik D. Olson, *The Quiet Shift of Power: Office of Management and Budget Supervision of Environmental Protection Agency Rulemaking Under Executive Order 12, 291*, 4 Va. J. Nat'l Res. L. 1, 64-72 (1984) (discussing examples).

not intensively review deregulatory measures.<sup>72</sup> 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.<sup>73</sup> Similarly, OMB cleared relaxation and suspension of noise reduction requirements in two days.<sup>74</sup> More recently, OMB declined to demand that EPA employ CBA to analyze relaxation of new source review requirements.<sup>75</sup> 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.<sup>76</sup>

Both OMB's critics and its supporters also 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.<sup>77</sup> But the

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<sup>72</sup> See Olson, *supra* note 71, 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 122 (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).

<sup>73</sup> Olson, *supra* note 71, at 54.

<sup>74</sup> *Id.*

<sup>75</sup> See OMB, *supra* note 23, at 108 (citing new source review changes as examples of "regulatory reform accomplishments"); GENERAL 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).

<sup>76</sup> See Richard N. L. Andrews, *Economics and Environmental Decisions, Past and Present*, in ENVIRONMENTAL POLICY UNDER PRESIDENT REAGAN'S EXECUTIVE ORDER 79 (V. Kerry Smith, ed. 1984) (citing the failure to subject deregulatory decisions to CBA as indicative of a bias in favor of deregulation).

<sup>77</sup> 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 52, 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); GENERAL 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 substantially 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 ENGLAND L. REV. 397, 411 (1990) (discussing the decline in

data indicate that in reviewing EPA rules, OMB often significantly changes between 45 and 75 percent of the rules it reviews.<sup>78</sup> 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.<sup>79</sup>

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.<sup>80</sup> 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 80%), 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).

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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 and Agency Rulemaking*, 99 HARV L. REV. 1075, 1088 (1986) (80% of rules approved without change); Olson, *supra* note 71, at 41 (noting that while 86% of rules cleared OMB without change as of 1982).

<sup>78</sup> See GAO 2003, *supra* note 52, at 82 (chart shows that OMB significantly changed 45% of the EPA rules it reviewed during a one year period in 2002); GAO 1995, *supra* note 77, at 11-12 (while 55% of all rules submitted in 1994 were changed while at OIRA, 74% of EPA rules were changed); (GENERAL ACCOUNTING OFFICE, REGULATORY REVIEW: INFORMATION ON OMB'S REVIEW PROCESS 13 (1989) (from 1981-89 OMB found 75% of government rules consistent with the executive order "without change" but only 52% of the EPA rules)

<sup>79</sup> See, e.g., Croley, *supra* note 77, at 873 (suggesting that the statistics suggest that OMB review might be "benign"); Olson, *supra* note 71, at 41-55 (claiming that OMB review significantly delays and weakens regulation).

<sup>80</sup> See Bowers, *supra* note 77, at 411(537 rules per year between 1981-87 were modified in response to OMB review). Steven Croley reports that the White House (meaning OMB) reviewed 34,386 rules from 1981-2001. Croley *supra* note 77, 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 7,000 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.

Also, the General Accounting Office 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.<sup>81</sup> OMB often influences rules informally before undertaking review of a completed draft regulation.<sup>82</sup> And agency employees have reported that they avoid even considering requirements that OMB would likely disapprove of.<sup>83</sup> So, 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.<sup>84</sup> Yet, Cass Sunstein cites several cases in which, he claims, show that CBA has helped make environmental regulation more

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<sup>81</sup> GAO, *supra* note 52, at 130; (some types of OMB influence are not reflected in the available documentation); Olson, *supra* note 71, at 41 (it is likely that OMB still had some informal impact upon the substance of rules that it approves unchanged).

<sup>82</sup> GAO 2003, *supra* note 52, at 7-8 (OIRA says that informal review prior to submission has been increasing and can have a substantial affect on the substance of rules).

<sup>83</sup> *Id.* at 130.

<sup>84</sup> ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION, SCIENCE, AND POLICY 694 (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 71, 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 10018 (claiming that an anti-regulatory philosophy undergirded the Reagan executive order); Olson, *supra* note 71, at 55; Bowers, *supra* note 77, at 411 (OMB exercises a veto over regulation). *See also* Caroline DeWitt, *Comment, The President's Council on Competitiveness: Undermining the Administrative Procedure Act and Judicial Review*, 6 Admin. L. Rev. 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.")

stringent or more extensive.<sup>85</sup> 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" letter, which Sunstein characterizes as examples of CBA spurring more extensive regulation.<sup>86</sup>

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.

#### 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.<sup>87</sup> OMB review involves hundreds of cases of OMB vetoing regulations.<sup>88</sup> Much more frequently, however, the implicit

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<sup>85</sup> See SUNSTEIN, *RISK & REASON*, *supra* note 3, at 26-27.

<sup>86</sup> See *id.* at 26-27, nn. 34-36.

<sup>87</sup> See, e.g., Olson, *supra* note 71, at 55 ("research has not revealed a single instance of OMB's insistence that EPA maximize net benefits by increasing health or environmental protection."). Cf. MORGENSTERN, *supra* note 68, at 2-3 (suggesting, in 1998, that economic analysis has made some regulation more stringent); SUNSTEIN, *supra* note 3, at 26-27 (in 2002, claiming that CBA makes regulation more stringent at times).

<sup>88</sup> 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 77, at 411 (OMB vetoed 38 rules per year between 1981 and 1987 and the agency withdrew an additional 52 per year); Olson, *supra* note 71, 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. Olson, *supra* note 71, 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 77, at 410 (arguing that the executive orders prohibition of proposal in the federal register during OMB review and of promulgation of final rules before responding to OMB review effectively create 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, Administrator, OIRA, OMB to Rosalind Knapp, Deputy General Counsel, Department of Transportation (August 8, 2001) (rejecting proposal to regulate sport aircraft); Certification of Aircraft and Airmen for Light Sport Aircraft, 69 FR 44772 (July 27, 2004) (to be codified at 14 CFR pts. 1, 21, 43, 45, 61, 65,

threat of OMB veto or opposition to EPA budget requests has induced EPA to beef up CBA and weaken regulation.<sup>89</sup> 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.<sup>90</sup> This debate in itself delayed regulation and therefore subjected beneficiaries to additional harms, while benefitting industry by reducing its compliance cost.<sup>91</sup> Often, agencies weakened 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.<sup>92</sup>

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and 91).

<sup>89</sup> See Olson, *supra* note 71, at 45-48. See also Bowers, *supra* note 77, at 411 (537 rules per year between 1981-87 were modified in response to OMB review).

<sup>90</sup> See *id.* at 48-49 (discussing delays stemming from interagency disputes between OMB and EPA).

<sup>91</sup> 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 10019-10020 (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 Regulation of Occupational Exposure to Benzene*, 82 ENVTL. HEALTH PERSP. 85, 185 (1985) (suggesting that delay in promulgating OSHA's benzene standard produced 30-490 additional leukemia cases).

<sup>92</sup> See GAO 1996, *supra* note 77, at 10 (Department of Transportation officials said they will not even propose certain regulatory provisions, because they know OIRA will not accept them); Bowers, *supra* note 77, at 412 (agencies withdrew 52 rules per year between 1981 and 1987); Smith, *supra* note 76, 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 53, 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. OMB insisted in the 1980s on discount rates of 10 percent for environmental benefits, while agencies wanted to use lower discount rates. *Id.* at 275. 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 risks 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.

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.<sup>93</sup> 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 CBA 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 question about the answer to that question: a CBA framework almost always led to laxer or less extensive regulation.<sup>94</sup>

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

Richard Morgenstern, a former EPA economist edited a book consisting of 12 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 12 regulations and to greater environmental benefits in five regulations.<sup>95</sup> The case studies themselves show that many of the cost saving changes involved relaxing the stringency or reducing the scope of regulation.<sup>96</sup> The case studies associate economic analysis with increased

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<sup>93</sup> See Olson, *supra* note 71, at 41-42 (2 percent of the rules OMB reviewed through 1982 were effectively vetoed, but not changed, and agencies withdrew 81 rules in this period, sometimes in response to signals from OMB).

<sup>94</sup> 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").

<sup>95</sup> MORGENSTERN, *supra* note 68, at 458. Morgenstern lists "rule improvements" associated with "economic analysis." In all twelve of the rules his 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.*

<sup>96</sup> 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

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.<sup>97</sup> 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 Morgenstern's anecdotal information to argue that "Cost and Benefits" are "for Everyone."<sup>98</sup> Sunstein cites four of the five cases involving increased benefits of examples of CBA contributing to more stringent regulation.<sup>99</sup> Professor 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 some good."<sup>100</sup> 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.<sup>101</sup> The assertion that CBA increases

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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.*

<sup>97</sup> *Id.*

<sup>98</sup> *See* SUNSTEIN, *supra* note 2, at 137.

<sup>99</sup> SUNSTEIN, *supra* note 3, at 26-27 nn. 34-36.

<sup>100</sup> SUNSTEIN, *supra* note 2, at 137.

<sup>101</sup> *See, e.g.,* GENERAL ACCOUNTING OFFICE, REGULATORY REFORM: IMPLEMENTATION OF THE 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 ARKANSAS L. REV. 161, 169-72 (1995) (discussing the Council on Competitiveness' support for weakening five regulations, including some where CBA was involved); O'Brien, *supra* note 71, 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, 229-249 (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

stringency relies upon only four cases.<sup>102</sup> 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. Because, the record would then indicate that it has made rules less stringent in dozens of cases, but made it 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 environmentally positive influence, which involves reductions of lead levels in the gasoline that small refiners produce, suggests that this case depends on prior non-CBA based regulation and enormous economic (i.e. non-health and environmental) benefits.

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OMB has sought “less stringent” regulations); Oliver A. Houck, *President X and the New (Approved) Decisionmaking*, 36 AM. U. L. REV. 535, 540-544 (1986-87) (detailing derailment of numerous individual regulations and two entire regulatory programs); SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS, HOUSE COMM. ON ENERGY & COMMERCE, 99TH CONG. 1ST SESS., EPA’S ASBESTOS REGULATIONS: REPORT ON A CASE STUDY OF OMB INTERFERENCE IN AGENCY RULEMAKING (1985) (detailing OMB efforts to thwart a ban on asbestos); *Public 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); *Center for Science in the Public Interest v. Dep’t of the Treasury*, 573 F. Supp. 1168, 1172 (D.D.C. 1983), *reversed on other grounds*, 797 F.2d 995, 1172 (D.C. Cir. 1986) (regulation requiring disclosure of the ingredients in alcoholic beverages, partly for health reasons, rescinded after review under the E.O. 12291); Olson, *supra* note 71, at 41-42 (by the end of 1982 OMB had vetoed 101 regulations and the agencies had withdrawn 81 rules), 64-73 (providing case studies of several regulations OMB sought to weaken).

<sup>102</sup> See MORGENSTERN, *supra* note 68, 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, citing Morgenstern).

<b>CBA in Dr. Morgenstern's Five Cases</b>		
	CBA Conducted <sup>103</sup>	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 <sup>104</sup>
Lead in Gasoline	Yes	Yes

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.<sup>105</sup> And it qualifies that conclusion by noting that separating out the influence of any particular form of analysis is problematic.<sup>106</sup> 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.<sup>107</sup>

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<sup>103</sup> I define CBA as analysis where at least some benefits have been quantified. The items marked as having no CBA used other forms of economic analysis, as explained below.

<sup>104</sup> 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. ID. at 228. I justify my know characterization below.

<sup>105</sup> ID. at 457-58.

<sup>106</sup> ID. at 457.

<sup>107</sup> 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).

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, because Sunstein wisely does not cite the organic chemical rule as an example of CBA making a rule more stringent, while adopting the four remaining cases of benefit enhancement as evidence of CBA's neutrality.<sup>108</sup> As Morgenstern's summary shows, EPA used the CBA in this rule to relax standards for some segments of the industry.<sup>109</sup> 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.<sup>110</sup> 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.<sup>111</sup> 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.<sup>112</sup> Instead, EPA "recommended," but did not require, that industry address the air emissions in its choice of technology.<sup>113</sup> Industry, predictably enough, did not choose the more expensive and environmentally responsible option on its own.<sup>114</sup> This is simply not a case of CBA making a regulation more extensive or stringent.

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<sup>108</sup> See SUNSTEIN, RISK & REASON, *supra* note 3, at 26-27.

<sup>109</sup> See MORGENSTERN, *supra* note 68, at 458.

<sup>110</sup> *Id.*

<sup>111</sup> Discussion with Jessica Landman, then a Senior attorney at the Natural Resources Defense Council in Washington, D.C., in the early 1990s.

<sup>112</sup> See Organic Chemicals and Plastics and Synthetic Fibers Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards, 52 Fed. Reg. 42522, 42558 (November 5, 1987). 42547 (no PSES for volatiles) 42552 (plants may reduce their costs by not using steam stripping) 42558 (EPA considered but rejected requiring steam stripping, preferring to rely on Clean Air Act authority) 42560 (rationale for waiting).

<sup>113</sup> *Id.* at 42561.

<sup>114</sup> *Id.* at 42552 (plants may reduce their costs by declining to employ steam stripping).

The underlying case study of the reformulated gasoline rule reveals that the agency did not carry out a CBA.<sup>115</sup> It did not monetize the benefits of regulation.<sup>116</sup> 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 analyzes the cost per unit of reduction, a form of analysis used for many technology-based regulation both before and after the promulgation of the executive orders demanding quantification, in dollar terms, of regulation's benefits.<sup>117</sup> While the case study authors claim that the cost effectiveness analysis strengthened the regulation,<sup>118</sup> even that conclusion is qualified. First of all, the authors recognize that the statutory standard governing this rulemaking severely constrained EPA's ability to make significant discretionary decisions.<sup>119</sup> Congress did not simply authorize standards under some general criteria, but specifically required a 15% reduction of Congressionally targeted pollution in phase one and at least a 20% reduction in phase two.<sup>120</sup> Accordingly, analysis of any kind would have a limited impact on this rule.<sup>121</sup> Second, EPA adopted the negotiated rule as the template for the final rule, which would indicate that the parties' agreement, not regulatory

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<sup>115</sup> See MORGENSTERN, *supra* note 68, at 400-01, 414 (the regulatory impact analysis analyzed cost effectiveness, but did not monetize the benefits of alternatives).

<sup>116</sup> 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.

<sup>117</sup> See Reformulated Gasoline Rule, 59 Fed. Reg at 7747 (defining cost effectiveness as the ratio of incremental cost of control to the tons of emissions reduced).

<sup>118</sup> See MORGENSTERN, *supra* note 68, at 414.

<sup>119</sup> See ID. at 394, 414.

<sup>120</sup> ID. at 394. Congress established a default presumption of 25%, but granted EPA the authority to depart from that presumption under some circumstances. See 42 U.S.C. § 7545(k)(3)(B). 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 II nitrogen oxide reductions. MORGENSTERN, *supra* note 68, at 408.

<sup>121</sup> See MORGENSTERN, *supra* note 68, at 394 (explaining that this statutory detail restricted "the alternatives available to EPA.").

analysis produced this rule.<sup>122</sup> 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.<sup>123</sup> 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 benefits to costs. If the monetized benefits played little role in the outcome, this calls into question the value of CBA and suggests that a simpler alternative form of analysis might do at least as well at less cost.<sup>124</sup> As it happens, the authors claim that the cost analysis influenced the negotiations between the parties.<sup>125</sup> That cost analysis indicated that a 90% reduction calculated on an annual average would actually cost less than a 70% reduction calculated on the basis of a monthly average.<sup>126</sup> This paved the way for an agreement to a 90% reduction based on an annual average.<sup>127</sup> The marginal cost effectiveness analysis described is a routine feature of technology-based decision-making. 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

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<sup>122</sup> 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*, Reformulated Gasoline Rule, 59 Fed. Reg. 7716, 7718-20 (February 16, 1994) (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 (President Bush announced a plan for ethanol in reformulated gasoline, because of ethanol's "importance to the nation's energy and agricultural policy").

<sup>123</sup> MORGENSTERN, *supra* note 68, at 293.

<sup>124</sup> *Cf.* Scott Farrow, *Does Analysis Matter?: Economics and Planning in the Department of Interior*, 73 REV. ECON. & STAT. 172, 176 (1991) (concluding that a cruder analysis that the CBA performed could have had equal influence on decisions about offshore oil and gas leasing).

<sup>125</sup> *Id.* at 291.

<sup>126</sup> *Id.* at 291-92.

<sup>127</sup> *Id.* at 292.

before the agency.<sup>128</sup> 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.<sup>129</sup> And EPA's final rule explains that the "benefits analysis forms no part of the legal basis for" the visibility rule.<sup>130</sup>

The case study of lead in drinking water claims that CBA, not some other form of analysis, had an environmentally positive influence on the regulation.<sup>131</sup> 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.<sup>132</sup> 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.<sup>133</sup> EPA set this unenforceable goal at zero, because it believed that no safe threshold had been established for some of lead's health effects.<sup>134</sup> 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 the (zero level) goal as feasible.<sup>135</sup> The case study claims that the CBA played

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<sup>128</sup> 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. 50172, 50182 (October 3, 1991). But, as the case study author 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.*

<sup>129</sup> In particular, the marginal cost effectiveness analysis indicated that achieving a larger reduction than industry initially favored would not significantly increase the cost. This is that 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. 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.

<sup>130</sup> Visibility Rule, 56 Fed. Reg. at 50184.

<sup>131</sup> MORGENSTERN, *supra* note 68, at 228.

<sup>132</sup> *See ID.* at 228-30 (pointing to numerous factors that influenced the rule).

<sup>133</sup> *ID.* at 206.

<sup>134</sup> *ID.* at 209.

<sup>135</sup> *ID.* 206-07.

an “unusually prominent role” in setting the enforceable standard, which the author describes as more stringent than EPA initially planned.<sup>136</sup> But the author says that this stringency stemmed from “many factors,” not just CBA.<sup>137</sup> 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.<sup>138</sup> Furthermore, although the CBA showed that the replacement of lead service pipes generated costs exceeding the quantified benefits,<sup>139</sup> EPA required replacement when cheaper corrosion control proved ineffective.<sup>140</sup> 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 anyway, instead relying solely upon feasibility and simplicity considerations to justify the regulation.<sup>141</sup>

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 gasoline as an additive in the 1920s, we already had substantial knowledge of lead’s adverse effects.<sup>142</sup> Accordingly, public health officials questioned its introduction into

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<sup>136</sup> ID. at 228.

<sup>137</sup> ID.

<sup>138</sup> ID. at 214.

<sup>139</sup> ID. at 228-229.

<sup>140</sup> See Maximum Contamination Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 56 Fed. Reg. 26460, 26503 (June 7, 1991).

<sup>141</sup> See id. at 26472-77, 26483-84.

<sup>142</sup> See James Lincoln Kitman, *The Secret History of Lead* 12-13 in THE NATION (March 20, 2000); Gerald Markowitz and 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).

gasoline.<sup>143</sup> 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.<sup>144</sup> Instead, government attempted to ascertain whether firm direct proof existed that lead in gasoline would poison consumers. Since the data did not exist to quantify the health effects or even directly prove their existence through environmental exposures, the Surgeon General allowed lead into gasoline, thus authorizing the growing petroleum industry to create a serious public health problem that might have been avoided.<sup>145</sup>

In the 1970s, however, Congress passed the Clean Air Act<sup>146</sup> and EPA began to address the problem of lead in gasoline.<sup>147</sup> 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.<sup>148</sup> EPA, however, had good reason to suspect the worst, given the abundant evidence of serious health damage from high levels of lead.<sup>149</sup> Accordingly, EPA ordered an 80 percent reduction of the lead content of gasoline, finding that lead posed "substantial risk of harm."<sup>150</sup> 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 lead

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<sup>143</sup> Kitman, *supra* note 142, at 20, 26.

<sup>144</sup> *Id.* at 32 (discussing 3000 year old body of evidence that lead is a poison).

<sup>145</sup> *Id.* at 12, 30, 32.

<sup>146</sup> Clean Air Act Amendments of 1970, Pub. L. 91-604, Dec. 31, 1970, 84 Stat. 1698. While this public law amended a pre-existing Clean Air Act, it expanded the federal role in securing clean air so significantly that many experts refer to the 1970 Amendments as the "Clean Air Act."

<sup>147</sup> *See Ethyl Corp. v. EPA*, 541 F.2d 1, 7 n. 1 (1976) (en banc) (all sections of the Clean Air Act pertinent to the regulation of lead in gasoline were added in the 1970 Amendments).

<sup>148</sup> *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").

<sup>149</sup> *See id.* at 7-9 (reviewing the evidence before EPA).

<sup>150</sup> *Id.* at 12; Frank Ackerman, Lisa Heinzerling, and Rachel Massey, *Wrong in Retrospect: Cost-Benefit Analysis of Past Successes*, 9 & n. 42 (2005) (forthcoming)

emissions is a speculative . . . one at best.”<sup>151</sup> 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.<sup>152</sup>

Nevertheless, the District of Columbia Circuit, sitting en banc, reversed the panel decision, by a narrow 5-4 vote, and allowed EPA’s lead reduction order to go into effect.<sup>153</sup> This decision interpreted EPA’s authority to regulate fuel additives that “will endanger the public health. . .” in a quite precautionary manner.<sup>154</sup> The majority opinion did not require proof that harm existed or was even probable.<sup>155</sup> 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.<sup>156</sup> This sort of qualitative risk assessment justified the lead standard, but a quantitative risk assessment was then impossible.<sup>157</sup> 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 . . .”<sup>158</sup>

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

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<sup>151</sup> Ethyl Corp. v. EPA, 7 ENV’T REP. (BNA) 1353, 1355 (D.C. Cir. 1975).

<sup>152</sup> See Ackerman, Heinzerling, & Massey, *supra* note 150, at 4 (“if we had waited . . . for a cost-benefit study to show net benefits from the first round of lead removal, we might still be waiting today.”)

<sup>153</sup> See Ethyl, 541 F.2d at 55 (stating that EPA’s lead abatement order could be enforced).

<sup>154</sup> See *id.* at 13 (explaining the “precautionary interpretation” of the “will endanger” standard).

<sup>155</sup> See *id.* at 17-18 (stating that 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”).

<sup>156</sup> *Id.* at 28.

<sup>157</sup> *Id.*

<sup>158</sup> 42 U.S.C. § 7545(c).

reduction in lead allowed researchers to compare levels of lead in the blood after the lead reduction to levels prior to the EPA order.<sup>159</sup> This comparison showed something that EPA only suspected at the time of the lead reduction order upheld in *Ethyl*, that reductions in lead in gasoline translated into significant reductions of lead in the blood stream.<sup>160</sup> 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.<sup>161</sup> 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."<sup>162</sup> Indeed, the Reagan Administration sought to hinder the Center for Disease Control from requiring lead screening programs to report data to it.<sup>163</sup> 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.<sup>164</sup>

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

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<sup>159</sup> See United States Civilian Blood Lead Levels Down One-Third: Preliminary Data Shows, 12 ENV'T REP. (BNA) 1546 (March 26, 1982) [hereinafter Blood Levels] (decline is a clear result of the prior lead phase-down).

<sup>160</sup> Kitman, *supra* note 142, at 37.

<sup>161</sup> Olson, *supra* note 71, at 37; MCGARITY, *supra* note 1, at 30-31 (providing some detailed information about this development); *Blood Levels*, *supra* note 159, at 44.

<sup>162</sup> Seidenfeld, *supra* note 84, at 15. See MCGARITY, *supra* note 1, at 31-44 (describing the decision to engage in marginal cost effectiveness analysis rather than CBA).

<sup>163</sup> Kitman, *supra* note 142, at 37.

<sup>164</sup> Olson, *supra* note 71, 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).

refiners in 1985.<sup>165</sup> 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 to write this rule.<sup>166</sup> 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.<sup>167</sup> 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 be for 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 show that a regulation passes a cost-benefit test.

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<sup>165</sup> MORGENSTERN, *supra* note 68, at 77.

<sup>166</sup> *Id.* at 52-53, 77.

<sup>167</sup> *Id.* at 71.

### C. OMB under 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 12866.<sup>168</sup> So an advocate of CBA as a neutral reform might expect OMB to use CBA neutrally, to strengthen some rules, while weakening others.

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 answer.<sup>169</sup> 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.<sup>170</sup>

GAO concluded that OMB "had significantly affected 25 rules" reviewed during this period.<sup>171</sup> So, this study examines all of these 25 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.

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<sup>168</sup> See GAO 2003, *supra* note 52, at 44 (agency officials report that Graham's OIRA is "relentless" in demanding quantification of costs and benefits).

<sup>169</sup> 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.

<sup>170</sup> GAO 2003, *supra* note 52, 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 review during the period GAO reviewed. See *id.*

<sup>171</sup> *Id.* The GAO defines significant changes that affecting "the scope, impact, or estimated costs and benefits" of the rule. *Id.* at 73

A review of these rules showed that OMB never supported changes that would make environmental, health, or safety regulations more stringent. In 24 of the 25 cases, all of the changes that OMB suggested would weaken environmental, health, or safety protection.<sup>172</sup> In one case, OMB returned an FAA rule because of concern about a provision that would have no discernible impact on safety.<sup>173</sup> In every single case, OMB favored changes that would reduce the burdens of regulation on regulated parties. This suggests that in practice CBA is used consistently to oppose environmental, health and safety regulation.

Nature of Changes OMB Sought			
	Anti-Environmental, Health, or Safety	Burden Reducing	Stricter
Yes	24	25	0
No	1	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.<sup>174</sup> Runoff is the largest known source of bacterial contamination, which leads to

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<sup>172</sup> I set out a list of rules in the appendix.

<sup>173</sup> This case involved an FAA rule governing certification of foreign repair stations to fix FAA regulated airplanes. *See* Repair Stations, 66 Fed. Reg. 41088 (August 6, 2001). 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 Administrator, Office of Information and Regulatory Affairs to Rosalind A. Knapp, General Counsel, Department of Transportation, July 20, 2001, available at [http://www.whitehouse.gov/omb/inforeg/return/faa\\_repair\\_stations\\_rtnltr-dot.html](http://www.whitehouse.gov/omb/inforeg/return/faa_repair_stations_rtnltr-dot.html). 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. The FAA initially adopted this requirement simply to limit its own workload. *See* Foreign Repair Station Rules, 53 Fed. Reg. 47362, 47366 (November 22, 1988).

<sup>174</sup> *See* GAO, *supra* note 52, at 176. Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development Category, 69 Fed. Reg. 22472 (April 26, 2004) [hereinafter, Construction Rule Withdrawal] (withdrawing the proposed effluent guidelines that OMB objected to).

thousands of annual beach closures in the United States.<sup>175</sup> It also has enormous negative impacts on both water quality and supply.<sup>176</sup> Runoff occurs both during construction and afterwards.<sup>177</sup> So, changes in how construction is carried out and in the design of development projects can reduce runoff.<sup>178</sup> But OMB opposed EPA's rule to address these impacts, and EPA eventually decided to scratch meaningful federal controls.<sup>179</sup>

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.<sup>180</sup> Indeed, one large facility, the Salem nuclear power plant, kills 359.4 million fish annually through water intake.<sup>181</sup> Accordingly, EPA proposed that 69 large plants in ecologically sensitive areas recirculate or reuse water to reduce fish kills by up to 98 percent.<sup>182</sup>

OMB disapproved of this proposal and persuaded EPA to adopt a cheaper and much less stringent proposal.<sup>183</sup> EPA's weaker final rule ostensibly required a 60%

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<sup>175</sup> NANCY STONER AND 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 (December 20, 2002) (copy on file with author).

<sup>176</sup> *Id.* at 2-5.

<sup>177</sup> *See id.* at 3.

<sup>178</sup> *See id.* at 4-5; Effluent Limitation Guidelines and New Source Performance Standards for the Construction and Development Category (Proposed Rule), 67 Fed. Reg. 42644, 42644 (June 24, 2002).

<sup>179</sup> *See* Construction Rule Withdrawal, 69 Fed. Reg. 22472.

<sup>180</sup> OMB Watch, *OMB Weakens EPA Proposal to Limit Fish Kills from Power Plants* (2002), available at <http://www.ombwatch.org/article/articleview/1074/1/132>.

<sup>181</sup> *Id.*

<sup>182</sup> *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) (estimating 72 to 98% reduction in entrainment); National Pollution Discharge Elimination System: Regulations Addressing Cooling Water Intake Structures for New Facilities, Final Rule, 66 Fed. Reg. 65,256, 65,266 (Dec. 18, 2001) (to be codified at 40 CFR Parts 9, 122, et al.) (rule would apply to 69 plants in ecologically sensitive areas).

<sup>183</sup> *See* GAO 2003, *supra* note 52, at 195-96 (detailing changes).

reduction in entrainment.<sup>184</sup> But it allowed pollution sources to evade this requirement by agreeing to restoration measures<sup>185</sup> of dubious efficacy. The United States Court of Appeals invalidated this restoration provision as contrary to the Clean Water Act.<sup>186</sup> 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.<sup>187</sup> Nitrogen oxides emissions contribute to particulate pollution, which scientists associate with tens of thousands of annual deaths in the United States.<sup>188</sup> 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.<sup>189</sup>

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.<sup>190</sup> It also proposed a second tier of standards providing a 30% reduction below the tier 1 levels.<sup>191</sup> OMB opposed the tier two limits and EPA finalized a rule that did nothing more than formalize limits that industry already had met.<sup>192</sup>

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

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<sup>184</sup> OMB Watch, *supra* note 180.

<sup>185</sup> *See* Riverkeeper v. EPA, 358 F.3d 174, 189 (2nd Cir. 2004) (describing restoration measures alternative).

<sup>186</sup> *See id.* at 189-91.

<sup>187</sup> Control of Emissions From New Marine Compression-Ignition Engines at or Above 30 Liters Per Cylinder, 68 Fed. Reg. 9746, 9755 (February 28, 2003) (to be codified at 40 C.F.R. pts. 9 & 4)

<sup>188</sup> *See* Bluewater Network v. EPA, 372 F.3d 404, 407 (D.C. Cir. 2004)

<sup>189</sup> *See id.* at 407. Ships also emit carbon monoxide. *Id.* And nitrogen oxide can impair visibility and acidify eco-systems.

<sup>190</sup> *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. 37548, 37597-98 (Proposed May 29, 2002).

<sup>191</sup> Proposal on New Large Marine Engines, 67 Fed. Reg. at 37551.

<sup>192</sup> New Large Marine Compression-Ignition Engines, 68 Fed. Reg. at 9748-49; GAO 2003, *supra* note 52, at 160.

Parkinson's disease.<sup>193</sup> Accordingly, EPA proposed to list magnesium as a hazardous waste, which would trigger obligations to treat it properly to prevent contamination of drinking water and soil.<sup>194</sup> OMB opposed the listing and EPA abandoned it.<sup>195</sup>

After a series of airplane accidents, safety experts became very concerned about the problem of aging planes. In one these accidents, the hull, cabin walls, and roof of a Boeing 737 blew off.<sup>196</sup> While the pilot managed to land the plane safely, a flight attendant was swept overboard to her death. In response, Congress passed the Aging Aircraft Safety Act of 1991<sup>197</sup>, which directed the FAA to issue a rule to address concerns about aging aircraft. Congress directed the FAA to write regulations that "ensure the continued air worthiness of aging aircraft."<sup>198</sup>

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<sup>193</sup> 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. Sinczuk-Walczak, M. Jakubowski, & W. Matczak, *Neurological and Neurophysiological Examinations of Workers Occupationally Exposed to Manganese*, 14 INT. J. OCCUP. MED. ENVIRON. HEALTH 329 (2001) (discussing increased emotional irritability, dysmnesia, 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 ENVIRON. HEALTH PERSPECT., Supp. 2 81 (1993) (discussing sexual dysfunction associated with manganese exposure).

<sup>194</sup> Even without listing, some waste containing magnesium would trigger treatment obligations under the Resource Conservation and Recovery Act (RCRA). For 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. 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.

<sup>195</sup> GAO 2003, *supra* note 52, at 9; Memorandum from Robert Kayser to RCRA Docket Number F-2001-ICMF-FFFF, Final Rule Changes Resulting from OMB Comments, 32-33 October 31, 2001 (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. 56258, 58260 (November 20, 2001).

<sup>196</sup> William Stockton, *Changes in Maintenance Sought to Keep Old Planes Flying Safely*, N.Y. TIMES, December 30, 1988, at A14.

<sup>197</sup> Pub. L. 102-143, Title IV, October 28, 1991, 105 Stat. 951.

<sup>198</sup> 49 U.S.C. § 44717(a)(1).

More than a decade later, FAA prepared a rule to require government inspections and reviews of safety and maintenance records beginning in an aircraft's 15<sup>th</sup> year of service and damage-tolerance-based inspections. OMB returned the rule to the FAA.<sup>199</sup> FAA later promulgated an interim final rule requiring inspections and record reviews designed to prevent aging airplanes from crashing.<sup>200</sup> But it has delayed compliance deadlines for many years and continued to take comments on the proper content of the rule.<sup>201</sup> OMB's concerns have led to decisions preventing the requirements from this rule from becoming effective, thereby increasing safety risks.

OMB intervention seeking significant changes in rules sometimes did not have such dramatic results.<sup>202</sup> 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.<sup>203</sup> 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.<sup>204</sup> 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.<sup>205</sup>

*b. Conclusions from the 25 Cases* - While the results of OMB review varied, the substantive direction basically did not. OMB almost always (24 out of 25

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<sup>199</sup> Letter from John D. Graham, OIRA Administrator to Ms Rosalind Knapp, Deputy General, Department of Transportation, September 14, 2001, available at [http://www.whitehouse.gov/omb/inforeg/return/faa\\_corrosion\\_return\\_letter.html](http://www.whitehouse.gov/omb/inforeg/return/faa_corrosion_return_letter.html).

<sup>200</sup> Aging Airplane Safety, 67 Fed. Reg. 72726 (December 6, 2002).

<sup>201</sup> See Advisory Circulars (AC) 91-60A, 120-XX, and 91-56B; Extension of Comment Period to Notices of Availability, 68 Fed. Reg. 5783 (February 4, 2003) (extending comment period).

<sup>202</sup> OMB intervention, for example, sometimes focused on changing compliance deadlines. See, e.g., GAO 2003, *supra* note 52, at 161 (reporting rule).

<sup>203</sup> See Responses to OMB Questions/Issues Highway Motorcycles Final Rule, item 14, in Docket A-2000-02, IV-H-7; Highway Motorcycle Rule, 69 Fed. Reg. at 2436, codified at 40 C.F.R. § 86.407-78; Letter from Robert French, EPA, to Amy L. Farrell, OMB, re: Limitations on Averaging (October 21, 2003), A-2000-02, IV-H-12.

<sup>204</sup> See Responses to OMB Questions, *supra* note 203, item 13.

<sup>205</sup> See Memorandum from Karl Simon, OTAG to Air Docket A-2002-02, re Meeting Summary (December 1, 2003), air docket A-2000-02, IV-E-26 (recounting the meeting). See also Email from Karl Simon, USEPA to Amy Farrell, Office of Management and Budget re: Closure of NHTSA Investigation of Honda Gold Wing Frame Failure (October 17, 2003), air docket A-2000-02, IV-H-29; Control of Emissions for Highway Motorcycles, 69 Fed. Reg. 2938 (January 15, 2004) (to be codified at 40 C.F.R. pts. 9, 86, 90, 1051).

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.<sup>206</sup> Yet OMB favored weaker regulation or opposed the regulation in all six cases.<sup>207</sup>

<b>OMB's Response to Favorable Cost-Benefit Ratios</b>	
	Agency Found Favorable Cost-Benefit Ratio
Number of Rules	6
OMB Seeks Laxer Regulation	6
OMB Disputes Favorable Ratio	3
OMB Does not Dispute Favorable Ratio	3

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.<sup>208</sup>

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<sup>206</sup> See FRANK ACKERMAN, USES AND ABUSES OF ECONOMIC ANALYSIS IN SETTING STORMWATER REGULATIONS, 6 (December 18, 2002) (available in rulemaking docket for the construction rule) (explaining that after EPA’s consultant corrected initial errors, the agency concluded that monetized benefits outweigh costs); EPA, ECONOMIC AND BENEFITS ANALYSIS FOR THE FINAL SECTION 316(B) PHASE II EXISTING FACILITIES, A2-2 (Feb. 2004) [hereinafter EXISTING FACILITIES ECONOMIC ANALYSIS]; EPA, ECONOMIC ANALYSIS OF THE FINAL REGULATIONS ADDRESSING COOLING WATER INTAKE STRUCTURES FOR NEW FACILITIES, 2-2 (Nov. 2001); Control of Emissions from Nonroad Large Spark Ignition Engines and Recreational Vehicles (Marine & Land-Based), 67 Fed. Reg. 68242, 68244 (November 8, 2002) (proposed) [hereinafter Snowmobile Rule] (estimating cost of \$210 million, “social gain” from fuel savings of \$550 million, and benefits of \$8 billion); Public Citizen v. Mineta, 340 F.3d 39, 43-44 (2<sup>nd</sup> Cir. 2003) (benefits of NHTSA’s proposal to monitor the pressure of all four tires outweighs the costs); Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 67 Fed. Reg. 5368, 5397-99 (Proposed February 5, 2002); Aircraft Regulatory Analysis Branch, APO-320 Office of Aviation Policy and Plans, Preliminary Regulatory Evaluation: Initial Regulatory Flexibility Determination, International Trade Impact Assessment, and Unfunded Mandates: Proposed Rule Corrosion Prevention and Control Program i, 23-25 (2001) (monetized benefits of proposed corrosion prevention rule outweigh the costs).

<sup>207</sup> See *infra* notes 41-45 and accompanying text. Cf. Farrow, *supra* note 124, 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”).

<sup>208</sup> These cases are EPA’s rule on emissions from Snowmobiles and other recreational vehicles, Snowmobile Rule, 67 Fed. Reg. 68242, EPA’s rule protecting fish from power plant water intakes, National Pollution Discharge Elimination System: Regulations

EPA's rule limiting emissions from snowmobiles provides an example of that sort of case. EPA originally proposed a 50 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.<sup>209</sup> OMB apparently agreed that benefits exceeded costs,<sup>210</sup> but did not consider the analysis adequate.<sup>211</sup> It complained about EPA's failure to discuss whether particular models of snowmobiles might be forced off the market, suggested EPA consider more regulatory alternatives, and demanded that EPA quantify the environmental benefits.<sup>212</sup> 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 in agency resources and the cooperation of the industry resisting the regulation, EPA simply weakened the regulation. It promulgated a rule demanding only a 30 reduction in carbon monoxide.<sup>213</sup> In justifying this relatively

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Addressing Cooling Water Intake Structures for New Facilities, Final Rule, 66 Fed. Reg. 65,256, 65,266 (Dec. 18, 2001), and the FAA's rule on addressing corrosion in airplanes, Corrosion Prevention and Control Program, 67 Fed. Reg. 62142 (proposed October 3, 2002). 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. The corrosion rule addressed an inspection program that would not be expected to generate very large costs and could save lives. 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* EPA, ECONOMIC AND BENEFITS ANALYSIS FOR THE FINAL SECTION 316(B) PHASE II EXISTING FACILITIES, D1-4 (Feb. 2004). 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. I analyze the snowmobile rule below.

<sup>209</sup> *See* OMB 2004, *supra* note 17, at 106 (estimating annual compliance cost at \$190 million annually and fuel cost savings at \$770 million annually).

<sup>210</sup> *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) (the 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.

<sup>211</sup> *See* Letter from John Graham, OIRA Administrator to Jeffrey Holmstead, Assistant Administrator for Air and Radiation (September 24, 2004), available at [http://www.whitehouse.gov/omb/inforeg/spark\\_engines\\_epa\\_sep2001.html](http://www.whitehouse.gov/omb/inforeg/spark_engines_epa_sep2001.html).

<sup>212</sup> *See id.*

<sup>213</sup> *See* *Bluewater Network v. EPA*, 370 F.3d 1, 10 (D.C. Cir. 2004).

weak standard, it relied rather heavily upon OMB’s concern that stricter standards might force some models of snowmobiles off the market.<sup>214</sup>

The United States Court of Appeals for the District Columbia Circuit reviewed this rule in *Bluewater Network v. EPA*.<sup>215</sup> The court chided EPA for implicitly assuming that “no existing model could be eliminated.”<sup>216</sup> 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.<sup>217</sup> As the court noted, however, EPA had not linked this concern to the statutory feasibility criterion, which allowed the agency to consider cost.<sup>218</sup> While EPA could not quantify the environmental benefits of the rule, it eventually quantified the health benefits, which it estimated at \$8 billion.<sup>219</sup> 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.<sup>220</sup>

**Cases in Which OMB Disputed Favorable Cost-Benefit Ratios**

	<b>Court Disagrees with OMB</b>	<b>Benefits Disputes</b>
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<sup>214</sup> Id. at 21.

<sup>215</sup> 370 F.3d 1 (D.C. Cir. 2004).

<sup>216</sup> Id. at 21.

<sup>217</sup> Id.

<sup>218</sup> Id.

<sup>219</sup> See *Control of Emissions From Nonroad Large Spark-Ignition Engines, and Recreational Engines (Marine and Land-Based)*, 67 Fed. Reg. 68242, 68244 (November 8, 2002).

<sup>220</sup> These cases are the stormwater runoff rule, Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development Category, 69 Fed. Reg. 22472 (April 26, 2004), an FAA proposal to regulate sport aircraft, Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 67 Fed. Reg. 5368 (Proposed February 5, 2002), and a NHTSA proposal to require devices monitoring tire pressure, see *Public Citizen v. Mineta*, 340 F.3d 39 (2nd Cir. 2003). Such disagreements occurred regularly under previous administrations as well. See Seidenfeld, *supra* note 84, at 43 (discussing “fundamental differences” between how OMB staff and agency officials “valued particular costs and benefits.”)

<b>Construction Effluent Guidelines</b>		<b>X</b>
<b>Light-Sport Aircraft Rule</b>		<b>X</b>
<b>Tire Pressure Monitoring Rule</b>	<b>X</b>	<b>X</b>

In one of three cases, a court implicitly held that OMB was wrong. This case involved a response to the Department of Transportation (DOT) investigation into tread separation on two models of Bridgestone/Firestone tires installed on Ford Explorers, which led to the recall of over 14 million tires.<sup>221</sup> In response, Congress passed the Transportation, Recall, Enhancement, Accountability, and Documentation Act<sup>222</sup> in 2000, which included a provision requiring the DOT to issue a rule establishing warning systems for under-inflated tires.<sup>223</sup> 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.<sup>224</sup> 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.<sup>225</sup> 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.<sup>226</sup> This difference in engineering judgment and predictions about indirect responses to regulatory requirements produced different conclusions about costs and benefits.<sup>227</sup> 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

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<sup>221</sup> Mineta, 340 F.3d at 43.

<sup>222</sup> Pub. L. No. 106-414, § 13, 114 Stat. 1800, 1806 (2000), *reprinted in*, 49 U.S.C. § 30123 note (2003).

<sup>223</sup> *Id.* at 43-44.

<sup>224</sup> Letter from John D. Graham, Director, Office of Information and Regulatory Affairs, OMB, to Kirk K. Van Tine, Office of General Counsel, Department of Transportation (February 12, 2002), *available at* [http://www.whitehouse.gov/omb/inforeg/return/dot\\_revised\\_tire\\_rtnltr.pdf](http://www.whitehouse.gov/omb/inforeg/return/dot_revised_tire_rtnltr.pdf).

<sup>225</sup> *See id.*

<sup>226</sup> Mineta, 340 F.3d at 50.

<sup>227</sup> *See* OMB, *supra* note 210, at 11 (asserting that the Tire Pressure Monitoring Rule (TPMS) had negative net benefits of \$706 to \$862 million per year).

option.<sup>228</sup> 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.<sup>229</sup>

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 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.<sup>230</sup> Benefit estimates developed during the rulemaking ranged from \$610 million to \$30.6 billion for the handful of benefits that could be monetized.<sup>231</sup> 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.<sup>232</sup> 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, many of the most important benefits from the rule.<sup>233</sup> Because of difficulties in correlating a particular industry's activities to specific harms, which vary depending 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.

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<sup>228</sup> *Id.* at 50-51.

<sup>229</sup> *Mineta*, 340 F.3d at 42.

<sup>230</sup> Nancy Stoner and 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 24 (December 22, 2002) (citing docket materials) (on file with the author).

<sup>231</sup> *See* Frank Ackerman, Uses and Abuses of Economic Analysis in Setting Stormwater Regulations, 5 (December 18, 2002) (available in rulemaking docket and on file with the author).

<sup>232</sup> *Id.* at 6.

<sup>233</sup> *See* ECONOMIC ANALYSIS OF PROPOSED EFFLUENT LIMITATION GUIDELINES AND NEW SOURCE PERFORMANCE STANDARDS 7-1 - 7-11 (May, 2002).

Thus, the emphasis on monetized benefits diverted attention from the rule's most important benefits.<sup>234</sup>

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.<sup>235</sup> 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.<sup>236</sup>

The other rule that generated a similar dispute about whether benefits exceeded costs, a rule for regulating sports airplanes, involved much less costs and much less monetized benefits.<sup>237</sup> Nevertheless, it would be hard to argue that avoiding some of the 51 deaths in sport airplane accidents that motivated this rule would constitute a trivial benefit.<sup>238</sup>

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.<sup>239</sup>

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<sup>234</sup> See Effluent Limitation Guidelines and New Source Performance Standards for the Construction and Development Category, 67 Fed. Reg. 42644, 42674-75 (Proposed June 24, 2002).

<sup>235</sup> Ackerman, *supra* note 231, at 5 (OMB argued for a lower estimate than the \$1.13 billion originally estimated by EPA, which involved a miscalculation understating benefits).

<sup>236</sup> OMB also objected to this rule on federalism grounds. See OMB, *supra* note 23, at 107 (because "the . . . ecological impacts . . . are largely local in nature, EPA ultimately 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, 1140-50 (D.C. Cir. 1992) (OMB opposed requirements that municipal waste combustors separate out recyclable materials and avoid burning batteries in part on federalism grounds).

<sup>237</sup> The FAA estimated the benefits at \$63 million over 10 years. Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft, 67 Fed. Reg. 5368, 5396 (Proposed February 5, 2002). It estimated the monetized benefits of avoided death alone, valued at only \$2.7 million per year, as greatly exceeding this cost. See *id.* at 5397-99.

<sup>238</sup> See *id.* at 5397 (51 fatalities occurred in light-sport aircraft between 1995 and 2001)

<sup>239</sup> While the executive order emphasizes review of rules costing more than \$100 million, it also authorizes review of on a variety of ill-defined grounds that open the doors to just about anything. See E.O. 12,866, § 3(f), § 6(b)(1), 58 Fed. Reg. 51735 (1993). 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

<b>OMB's Emphasis on Economically Insignificant Rules: 2002-2003</b>		
	Significant Rules <sup>240</sup>	Insignificant Rules
Rules Reviewed	14	71
Significant Changes Sought	5	20

GAO found that OMB reviewed 71 economically insignificant rules, but only 14 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,<sup>241</sup> charging fees to support government testing of vehicle emissions,<sup>242</sup> and establishing an administrative prerequisite for FAA certification of foreign aircraft repair stations<sup>243</sup>. Because of OMB's focus on economically insignificant rules, OMB sought significant changes in twenty economically insignificant rules and only five economically significant ones.<sup>244</sup> 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.<sup>245</sup> The hypothesis that

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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).

<sup>240</sup> This refers to economically significant rules, those costing \$100 million per year or more.

<sup>241</sup> See Consolidated Emissions Reporting, 67 Fed. Reg. 39602 (June 10, 2002).

<sup>242</sup> 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. 51402, 51413-15 (August 7, 2002).

<sup>243</sup> See Letter From Donald R. Arbuckle, Deputy Administrator, Office of Information and Regulatory Affairs to Rosalind A. Knapp, General Counsel, Department of Transportation, July 20, 2001, available at [http://www.whitehouse.gov/omb/inforeg/return/faa\\_repair\\_stations\\_rtnltr-dot.html](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. 41088, 41095 (August 6, 2001) (promulgating the requirement that foreign repair stations demonstrate that FAA-regulated aircraft need their services in order to obtain FAA certification).

<sup>244</sup> GAO 2003, *supra* note 52, at 83.

<sup>245</sup> ID.

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.<sup>246</sup>

The demand for CBA also sometimes led to OMB opposition to regulation where an agency could not quantify the benefits of its proposals. In 19 of the 25 rules reviewed, the agencies were unable to monetize any of the proposals' benefits prior to OMB review.<sup>247</sup>

<b>Basis for OMB Review</b>	
Completed Agency CBA	6 Cases
Inability to Monetize or Other Reasons	19 Cases

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) and ozone (exacerbating millions of asthma cases), 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.<sup>248</sup> Yet, a demand for CBA makes rules that would meet applicable statutory criteria suspect at OMB, just because the benefits resist quantification.

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<sup>246</sup> 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 37, approximately 11 percent, were economically significant. OMB 2004, *supra* note 23, at 6-7. Of these major rules, 25 implemented federal budgetary programs. *Id.* Only twelve involved social regulations generating new costs and benefits. *Id.*

<sup>247</sup> 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 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.

<sup>248</sup> See Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines At or Above 30 Liters/Cylinder, 67 Fed. Reg. 37548, 37586 (Proposed May 29, 2002). 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.<sup>249</sup> 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.<sup>250</sup> Since this rule sets a transfer fee, it generates no societal cost (administrative cost aside)<sup>251</sup> 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.<sup>252</sup> 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.<sup>253</sup> While some OMB review may not be germane to the question of CBA’s neutrality, the consistent direction of rules changed based, at least in part, on CBA or the lack of it, 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.<sup>254</sup> Yet, it significantly changed 6 of 8 rules proposed by EPA’s office of water, 7 of 14 from EPA’s office of air and radiation and 1 or 4 rules from the its

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<sup>249</sup> 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 ARKANSAS L. REV. 161, 170-71 (1995) (discussing the Council on Competitiveness’ support for gutting operating permit rules under the Clean Air Act).

<sup>250</sup> See Chronic Wasting Disease in Cervids; Payment of Indemnity, 67 Fed. Reg. 5925, 5927-28 (February 8, 2002); GAO 2003, *supra* note 52, at 139 (OMB suggested that the indemnity be capped at 95% of the animal’s value).

<sup>251</sup> See Posner, *supra* note 43, at 1069.

<sup>252</sup> Cervid Indemnity Payments, 67 Fed. Reg. at 5927-28.

<sup>253</sup> See O’Brien, *supra* note 71, at 60 (during the first Bush administration, OMB review “focused primarily on political and policy issues” and CBA was “rarely mentioned”).

<sup>254</sup> GAO 2003, *supra* note 52, at 69 (finding significant changes in 25 of the 85 rules reviewed during the study period).

solid waste office.<sup>255</sup> 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.<sup>256</sup> These standards promise to greatly reduce emissions of nitrogen oxide, sulfur, particulate, and non-methane hydrocarbons.<sup>257</sup> 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).<sup>258</sup> 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.<sup>259</sup> EPA expected this rule to prevent more 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.<sup>260</sup>

EPA involved OMB in a joint effort at creating a CBA early on in the rulemaking process.<sup>261</sup> 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.<sup>262</sup> Still, this rule shows that OMB will sometimes support strict rules when monetized benefits exceed costs by an enormous margin.

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<sup>255</sup> Id. at 75.

<sup>256</sup> Control of Emissions from Nonroad Diesel Engines and Fuel, 69 Fed. Reg. 38958 (June 29, 2004) (to be codified at 40 CFR pts. 9, 69 et al.)

<sup>257</sup> Id. at 38958.

<sup>258</sup> Id. at 38962-68 (discussing the health impacts of the regulated diesel emissions in detail).

<sup>259</sup> Id. at 38958.

<sup>260</sup> Id. at 38958, 38960; OMB, *supra* note 23, at 108.

<sup>261</sup> OMB, *supra* note 23, at 108; GAO 2003, *supra* note 52, at 37.

<sup>262</sup> See Laura J. Lowenstein and 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 ENV'T'L L. REP. (Env't. L. Inst.) 10954, 10957 (2004).

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-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.”<sup>263</sup> 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.<sup>264</sup> 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.<sup>265</sup>

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<sup>263</sup> OFFICE OF MANAGEMENT AND BUDGET NEWS RELEASE, OMB ENCOURAGES LIFESAVING ACTIONS BY REGULATORS, September 18, 2001, *available at* <http://www.whitehouse.gov/omb/pubpress/2001-35.html> (last visited April 27, 2004).

<sup>264</sup> See SUNSTEIN, RISK & REASON, *supra* note 1, at 26.

<sup>265</sup> 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.”).

While two of the OMB prompt letters rely upon at least a very rough CBA<sup>266</sup>, most of the prompt letters sent do not monetize costs and benefits,<sup>267</sup> even through a

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<sup>266</sup> See Letter from John D. Graham, Administrator, Office of Information and Regulatory Affairs (OIRA) to John Henshaw, Assistant Secretary of Labor (September 18, 2001), *available at* [http://www.whitehouse.gov/omb/pubpress/osha\\_prompt\\_letter.html](http://www.whitehouse.gov/omb/pubpress/osha_prompt_letter.html) (last visited April 27, 2004) [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, Administrator, OIRA to Tommy G. Thompson, Secretary of Health and Human Services (September 18, 2001), *available at* [http://www.whitehouse.gov/omb/pubpress/hhs\\_prompt\\_letter.html](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, Administrator, OIRA, to Michael J. Jackson, Deputy Secretary, Department of Transportation (December 7, 2001), *available at* [http://www.whitehouse.gov/omb/inforeg/nhtsa\\_prompt120701.html](http://www.whitehouse.gov/omb/inforeg/nhtsa_prompt120701.html) (last visited, June 10, 2004) [hereinafter Crash Test Letter] (estimating cost of improving vehicles but not monetizing benefits).

<sup>267</sup> See Letter from John D. Graham, Administrator, OIRA to Christine Todd Whitman, Administrator, Environmental Protection Agency (December 4, 2001), *available at* [http://www.whitehouse.gov/omb/inforeg/epa\\_pm\\_research\\_prompt120401.html](http://www.whitehouse.gov/omb/inforeg/epa_pm_research_prompt120401.html) (last visited April 27, 2004) [Particulate Research Letter] (urging EPA to focus its research on particulate matter on industry research priorities); Letter from John D. Graham, Administrator, OIRA to Kim T. Nelson, Assistant Administrator, Office of Environmental Information, United States Environmental Protection Agency, March 4, 2002, *available at* [http://www.whitehouse.gov/omb/inforeg/epa\\_pm\\_research\\_prompt120401.html](http://www.whitehouse.gov/omb/inforeg/epa_pm_research_prompt120401.html) [hereinafter TRI Letter] (urging EPA to improve the utility of Toxic Release Inventory data in various ways); Letter from John D. Graham, Administrator, OIRA to Armando Falcon, Jr., Director Office of Federal Housing Enterprise Oversight, *available at* [http://www.whitehouse.gov/omb/inforeg/prompt\\_ofheo052902.html](http://www.whitehouse.gov/omb/inforeg/prompt_ofheo052902.html) (last visited, April 27, 2004) [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, Administrator, OIRA to Judge Craig Manson, Assistant Secretary for Fish, Wildlife, and Parks, Department of Interior (August 21, 2003), *available at* [http://www.whitehouse.gov/omb/inforeg/prompt/doi\\_mapping\\_prompt.pdf](http://www.whitehouse.gov/omb/inforeg/prompt/doi_mapping_prompt.pdf) (last visited on June 10, 2004) [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, Administrator, OIRA to Mary Hutzler, Director, Office of Integrated Analysis and Forecasting, Energy Information Administration, U.S. Department of Energy (February 24, 2003), *available at* [http://www.whitehouse.gov/omb/inforeg/prompt-ltr\\_eia.pdf](http://www.whitehouse.gov/omb/inforeg/prompt-ltr_eia.pdf) (last visited, June 10, 2004) [hereinafter Energy Forecasting Letter] (raising a concern about modeling assumptions in DOE energy forecasts, without any reference to CBA); Letter from John D. Graham, Administrator, OIRA to Claude A. Allen, Deputy Secretary, Department of Health and Human Services & James R. Mosely, Deputy Secretary, Department of Agriculture, (May 27, 2003), *available at* [http://www.whitehouse.gov/omb/inforeg/prompt\\_dietary\\_052703.pdf](http://www.whitehouse.gov/omb/inforeg/prompt_dietary_052703.pdf) [hereinafter Dietary

back of the envelope calculation. So most of them have nothing to do with CBA.

None of the prompt letters addressing environmental, health, and safety regulation sought to initiate fresh regulation.<sup>268</sup> One of the letters that uses some CBA simply supports ongoing rulemaking that the FDA had already initiated to label transfats in foods, as even OMB's press release acknowledges.<sup>269</sup> 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 work place through "information, economic incentives, voluntary agreement" or, last and apparently least, "compulsory regulation."<sup>270</sup> 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.<sup>271</sup> A third letter contains

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Guidelines Letter] (urging revisions in dietary guidelines, with no reference to costs and not monetization of benefits); Letter from John D. Graham, Administrator, OIRA to Mark E. Ray, Office of the Undersecretary for Natural Resources and Environment, U.S. Department of Agriculture, November 18, 2002, *available at* [http://www.whitehouse.gov/omb/inforeg/prompt-ltr\\_env\\_qual\\_incent\\_prog.pdf](http://www.whitehouse.gov/omb/inforeg/prompt-ltr_env_qual_incent_prog.pdf) (last visited on June 10, 2004) [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).

<sup>268</sup> 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 267, at 2. OMB, in its report to Congress listed a "prompt letter" to EPA on nonroad diesel emissions. *See* OMB, *supra* note 210, 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* EPA, EPA AND OMB WORKING TO SPEED THE REDUCTION OF POLLUTION FROM NONROAD DIESEL ENGINES (June 7, 2002), *available at* <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.

<sup>269</sup> *See* Transfats Labeling Letter, *supra* note 266 (supporting FDA's proposed rule on transfats labeling); OFFICE OF MANAGEMENT AND BUDGET NEWS RELEASE, *supra* note 263, (characterizing its transfats prompt letter as urging "acceleration of an ongoing rulemaking"). The Transfats 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." Transfats Labeling Letter, *supra* note 266, at 1.

<sup>270</sup> *See* Defibrillators Letter, *supra* note 266.

<sup>271</sup> Letter from John L. Henshaw, Assistant Secretary for Occupational Safety and Health, Department of Labor to John D. Graham, Administrator, OIRA, May 4, 2004, *available at* [http://www.whitehouse.gov/omb/inforeg/prompt/dol\\_aeds\\_update.pdf](http://www.whitehouse.gov/omb/inforeg/prompt/dol_aeds_update.pdf)

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.<sup>272</sup> The letter urging NHTSA to give this rulemaking priority acknowledges that this rule is already on NHTSA's regulatory agenda.<sup>273</sup> Hence, this third letter neither initiated a new regulation or regulatory requirement, nor reflected a response to CBA.<sup>274</sup>

The overwhelming majority of the prompt letters endorsed ongoing agency efforts to improve disclosure and use of information.<sup>275</sup> The crash test letter was the only one to call on an agency to even continue an ongoing effort to require corporate

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(announcing completion of a flyer on Defibrillators and discussing further voluntary efforts); OMB 2004, *supra* note 17, at 113.

<sup>272</sup> See Crash Test Letter, *supra* note 266 (“... I suspect that the benefits” of a frontal offset crash test “could substantially exceed its costs.”)

<sup>273</sup> See GAO 2003, *supra* note 52, at 49.

<sup>274</sup> 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 increment 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 266. 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 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 OMB WATCHER no. 1, available at <http://www.ombwatch.org/article/articleview/2607/1/311><http://www.ombwatch.org/article/articleview/2607/1/311>.

<sup>275</sup> See Particulate Research Letter, *supra* note 267 (supporting EPA research aimed at pinpointing sources of health damage from particulate air pollution); Transfats Labeling Letter, *supra* note 266 (supporting FDA proposal to require disclosure of transfats content of food); TRI Letter, *supra* note 267 (urging improvements in Toxic Release Inventory reporting of pollution); Energy Forecasting Letter, *supra* note 267 (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 267 (supporting revisions to information provided consumers about healthy diets); Habitat Mapping Letter, *supra* note 267 (supporting increasing availability of mapping data useful for private compliance with the Endangered Species Act); Fannie Mae Letter, *supra* note 267 (supporting strengthening disclosure requirements applicable to federal agencies making housing loans).

conduct changes that actually directly reduce risks.<sup>276</sup> 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."<sup>277</sup> 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)<sup>278</sup> has produced a list of 189 regulatory reform

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<sup>276</sup> See Crash Test Letter, *supra* note 266.

<sup>277</sup> OMB 2004, *supra* note 17, at 58.

<sup>278</sup> *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. 22041, 22054 (May 2, 2001) (reforms sought that increase net benefits); GAO 2003, *supra* note 52, at (2002 solicitation asked for not just rescision 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 52, 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, 100-103, 113, 115-17. 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. OFFICE OF MANAGEMENT AND BUDGET, INFORMING REGULATORY DECISIONS: 2003 REPORT TO CONGRESS ON THE COSTS AND BENEFITS OF REGULATIONS AND UNFUNDED MANDATES ON STATE, LOCAL, AND TRIBAL ENTITIES 21-22 (2003) (over 100 suggestions were not fresh initiatives, but the others were referred to the agencies). 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 MANAGEMENT AND BUDGET, STIMULATING SMARTER REGULATION: SUMMARIES OF PUBLIC SUGGESTIONS FOR REFORM OF REGULATION AND GUIDANCE DOCUMENTS 7 (2002) (showing that this proposal emanated from pro-safety groups and sought to solve an enforcement problem created by a Fifth Circuit judicial decision).

recommendations, which OMB has directed the agencies to review.<sup>279</sup> The sheer number of these anti-regulatory prompts dwarfs the number of somewhat pro-regulatory prompts. The 181 recommendations include 93 recommendations for changes in EPA rules, all but two of which came from industry or pro-industry groups.<sup>280</sup>

#### 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 a virtue.<sup>281</sup> But most

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<sup>279</sup> 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.* at 58.

<sup>280</sup> *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.

<sup>281</sup> 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 281, at 10-11. While Breyer himself suggests that agencies sometimes need to be more stringent, *Id.* at 23, those who

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<sup>282</sup>, 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. For the changes that reduced the cost of regulation generally reduced its benefits and the change, the phase-down of lead, which increased a rule's benefits, also increased the regulated industry's cost.<sup>283</sup> 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.<sup>284</sup> 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. For these two ideas about how CBA should influence decision-making have theoretically different effects on regulatory practice. They therefore differ somewhat in their implications for the neutrality of CBA.

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agree that detrimental tunnel vision pervades regulatory decision-making might think that no spur to stricter regulation is ever needed.

<sup>282</sup> MORGENSTERN, *supra* note 68, at 456-59.

<sup>283</sup> See MCGARTY, *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 Richard Morgenstern, *supra* note 68, 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.

<sup>284</sup> Cf. Buzbee, *supra* note 8, at 353 (suggesting that CBA empowers economists who are hostile to stringent regulation "by virtue of their training or politics.")

### 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 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.<sup>285</sup> 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.<sup>286</sup> 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.<sup>287</sup>

These greater resource requirements point to slower regulation per dollar of government expenditure, thereby decreasing the efficiency of the standard-setting process. Unless Congress augments resources to carry out regulatory analysis, this inefficiency will delay regulation.<sup>288</sup> These delays have two theoretical implications. First, those exposed to hazards must remain exposed longer, and therefore are more

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<sup>285</sup> See generally Buzbee, *supra* note 8, at 349 (proposals to add CBA would broaden the discretion of administrative agencies).

<sup>286</sup> Driesen, *supra* note 11, at 82 (stating that analysis should focus on factors the legal criterion governing a decision make relevant).

<sup>287</sup> See Driesen, *supra* note 13 at 10019 n. 204.

<sup>288</sup> Cf. Buzbee, *supra* note 8, at 352-53 (the claim that regulatory reform bills requiring judicially reviewable CBA “would lead to regulatory paralysis” is “surely correct.”)

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.<sup>289</sup> 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.<sup>290</sup> 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.<sup>291</sup> They also sometimes advocate a less demanding variant upon the No Excess Cost Requirement, that costs should not grossly exceed benefits.<sup>292</sup> It will prove useful to analyze a simple No Excess Cost Requirement and then to note how these variants might influence the analysis.

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 50% 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 50% reduction. Usually, however, marginal regulatory costs decline rapidly as regulation becomes less stringent. Assuming that the

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<sup>289</sup> In practice, this predictability probably does not exist, because too many judgment calls are required in estimating benefits. *See id.* at 369-371 (explaining that CBA relies on non-transparent political judgments).

<sup>290</sup> *See e.g.*, Executive Order 12,291, 3 C.F.R. 127 (1982), *reprinted in* 5 U.S.C. § 601 note (requiring that the costs of regulation not exceed its benefits to the extent permitted by law). The order was signed on February 17, 1981.

<sup>291</sup> Hahn & Sunstein, *supra* note 28, at 1498-99 (articulating this position as a presumption).

<sup>292</sup> *See, e.g.*, SUNSTEIN, *supra* note 3, at 119-120

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 5% reduction generates \$10,000 in compliance cost and \$100,000 worth of benefits, the agency can promulgate a regulation requiring a 5% reduction, even though it cannot, consistent with the No Excess Cost criterion require 50% 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 40% pollution reduction would produce \$500,000 in compliance expenditures and \$600,000 worth of benefits. This produces a more health protective outcome than the 5% reduction. Both the 40% reduction and the 5% 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 regulatory to choose the more stringent 40% 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 marginal 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.

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 benefits<sup>293</sup> 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.<sup>294</sup> Whatever factors overcome the presumption in this case only reduce the number of cases in which the criterion

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<sup>293</sup> 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.")

<sup>294</sup> See Driesen, *supra* note 11, at 59.

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, normally advocate some variant of the No Excess Cost requirement. 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.<sup>295</sup> 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.<sup>296</sup> This test is unclear, but amenable to interpretation as consistent with the No Excess 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.<sup>297</sup>

2. *Cost Equaling Benefit* - The regulatory reformers' prescription is not as biased as the economist's 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.<sup>298</sup> 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 5% reduction nor the 50% reduction would satisfy the Optimality Criterion. The 5% reduction flunks because it generates benefits in excess of cost. The 50% reduction flunks

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<sup>295</sup> 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 12866, § 2, 3 C.F.R. 638 (1993), *reprinted in* 5 U.S.C. § 601 note (Supp. 1996).

<sup>296</sup> *Id.* § 1(b)(6).

<sup>297</sup> These are the three cases where OMB disagreed with the agency's conclusion that costs exceed benefits. *See infra* notes 220-237 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.

<sup>298</sup> *See* I HANDBOOK OF ENVIRONMENTAL ECONOMICS: ENVIRONMENTAL DEGRADATION AND INSTITUTIONAL RESPONSES, at 253-54 (2003) (defining the “social optimum” regulation or tax as one that equates marginal abatement cost to marginal damage).

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 optimization criterion might not be neutral relative to existing law. Some key provisions of existing statutes require full protection of public health or the environment.<sup>299</sup> 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.<sup>300</sup> 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.<sup>301</sup> 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.<sup>302</sup>

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<sup>299</sup> See, e.g., 42 U.S.C. §§ 7409(b), 7412(f)(2); *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. \_\_\_\_ (2005) (forthcoming).

<sup>300</sup> See Driesen, *supra* note 15, at 560-63 (explaining this point in detail).

<sup>301</sup> See Driesen, *supra* note 11, at 19. See also Amy Sinden, *The Economics of Endangered Species: Why Less is More in the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENV'T'L. L. REV. 129, 184-92 (2004) (discussing “short-cut” standards, which consider cost without employing CBA).

<sup>302</sup> See Driesen, *supra* note 11, at 3.

These provisions strongly encourage agencies to avoid widespread plant shutdowns.<sup>303</sup>

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, than CBA would produce greater stringency than the feasibility principle.<sup>304</sup> 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.<sup>305</sup>

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 health primacy, except where doing so might concentrate economic harms on workers victimized by plant shutdowns.<sup>306</sup> It implicitly rejects the notion that marginal differences in prices matters much to human welfare, but accepts the notion that sudden elimination of peoples' income can provide a detriment comparable in importance to the experience of loss of life or good health.<sup>307</sup> Thus, selection of the Optimality Criterion involves a non-neutral value choice.

While the optimization criterion has not figured prominently in the policy debate about the regulatory reform literature, it has played a minor role in practice.

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<sup>303</sup> Id.

<sup>304</sup> See Sunstein, 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); Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 YALE L. J. 165, 232-33 (1999) (same).

<sup>305</sup> Cf. Driesen, *supra* note 11, at 74-75 (pointing out that the notion that CBA would lead regulators to shut plants appears unlikely).

<sup>306</sup> Id. at 35-38.

<sup>307</sup> Id.

The current executive order encourages agencies to “maximize net benefits.”<sup>308</sup> 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.<sup>309</sup> 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.<sup>310</sup> 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.

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<sup>308</sup> Cf. Stewart, *supra* note 38, at 42 n. 61 (noting that the executive order does not explain how to determine “net benefits.”). President Reagan’s earlier executive order, 12,291, contained similar requirements. It required, to the extent permitted by law agencies to choose “regulatory objectives” that “maximize net benefits.” E.O. 12,291 § 2(c). It also generally requires agencies to establish regulatory “priorities” maximizing net benefits. *Id.* § 2(e). 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, and 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. David M. Driesen, *Getting Our Priorities Straight: One Strand of the Regulatory Reform Debate*, 31 ENVTL L. REP. (Env’tl L. Inst.) 10003, 10014 (2001) (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 AND 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)).

<sup>309</sup> See GAO 2003, *supra* note 52, 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).

<sup>310</sup> 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 308, 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, 223-226 (1999) (suggesting that efficiency land allocation involves setting the marginal benefit of one land use equal to the marginal benefit of a competing land use).

Less obviously, benefits exceeding cost (on average or at the margin) involves an efficiency problem as well.<sup>311</sup> 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.<sup>312</sup> 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.<sup>313</sup> This might be justified when the cost of making the incremental improvement exceeds the incremental value of the benefit, at least according to economic theory.<sup>314</sup> 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 reduction 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.<sup>315</sup>

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 option than those proposed, since all of the proposed options indicated that quantifiable benefits greatly exceeded cost.<sup>316</sup> A conflict erupted within OMB between the “purists” - those devoted to analysis for its

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<sup>311</sup> See Carlson *et al.*, *supra* note 308, at 335 (maximizing net benefits may require “more stringent” measures).

<sup>312</sup> 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).

<sup>313</sup> *Cf.* Baumol & Oates, *supra* note 312, at 18 (optimal taxes will reduce smoke, but not eliminate this externality).

<sup>314</sup> See Baumol & Oates, *supra* note 312, at 136 (after reducing “smoke” damage to twenty cents per unit of output through installation of pollution control devices, a charge of fifty cents per unit of output would not be optimal).

<sup>315</sup> See *SIEBERT*, *supra* note 310, at 46-48, 65 (equating maximum net benefit with optimal pollution levels).

<sup>316</sup> See *MCGARITY*, *supra* note 1, at 48, 50, 61.

own sake - and the “realists” - those more interested in deregulation.<sup>317</sup> The realists prevailed and EPA promulgated its proposed option with seriously examining more stringent alternatives than those already on the table.<sup>318</sup>

The foregoing discussion shows that CBA is generally not neutral. The forms of it 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 emerges 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.<sup>319</sup> But even the neglected Optimality Criterion is not generally neutral in effect, nor is it value neutral.

### *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.<sup>320</sup> CBA’s

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<sup>317</sup> ID. at 61.

<sup>318</sup> ID.

<sup>319</sup> See ROSE-ACKERMAN, *supra* note 63, at 16-19 (defending CBA as “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 at a cost that is justified by the benefits.” 42 U.S.C. § 300g-1(b)(6). 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, i.e. as an instance of the No Excess Cost Rule. While this language uses CBA as a restraint on stringency and 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.

<sup>320</sup> See also Sidney A. Shapiro, *OMB’s Dubious Peer Review Procedures*, 34 ENV’T L. REP. (Env’tl L. Inst.) 10064, 10069 (2004) (OMB advises agencies to disqualify scientists who do government supported research, but not industry supported research).

friends have responded by defending various cost-benefit methodologies.<sup>321</sup> Even though other literature makes extended discussion of methodological issues unnecessary in this article,<sup>322</sup> 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.<sup>323</sup> Such choices cannot be neutral in the sense of value free. Since CBA requires methodologies, it cannot be neutral.

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 to valuing health and environmental benefits.<sup>324</sup> A willingness to pay approach estimates the monetary value of an environmental benefits by seeking to figure out how much a potential victim of a hazard is willing to pay to avoid a health and environmental harm. 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

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<sup>321</sup> See, e.g., Hahn, *supra* note 247, at 1026-1027, 1038-39; Cass R. Sunstein, *Lives, Life-Years and Willingness to Pay*, 104 COLUM. L. REV. 205 (2004); Mathew D. Adler and Eric A. Posner, *Implementing Cost-Benefit Analysis When Preferences are Distorted*, 29 J. LEGAL STUD. 1105, 1116-1124 (2000) (defending agency deviation from "textbook CBA").

<sup>322</sup> See, e.g. Sunstein, *supra* note 321; ACKERMAN & HEINZERLING, *supra* note 4.

<sup>323</sup> For critiques of the value choices involved, see ACKERMAN & HEINZERLING, *supra* note 4; 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); Armatya Sen, *The Discipline of Cost-Benefit Analysis*, 29 J. LEGAL STUDIES 931 (2000); Henry Richardson, *The Stupidity of Cost-Benefit Analysis*, 29 J. LEGAL STUDIES 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 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. 159, 171 (1983) (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).

<sup>324</sup> 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 counterargument based on the Coase theorem).

health or environmental harm. The literature recognizes that willingness to pay measures provide much lower valuations than willingness to accept measures.<sup>325</sup> Regulators have consistently employed a willingness to pay approach, thereby producing much lower benefits estimates than a willingness to accept approach would generate.<sup>326</sup>

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 would a company 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 would 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 willingness-to-pay approach based on imperfect information involves an important pro-industry and anti-environmental value choice.<sup>327</sup> It also is strikingly at odds with economic theory, which posits that market exchange is efficient only under conditions of perfect information. Indeed, a philosophically strong case for Kaldor-Hicks efficiency 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.<sup>328</sup>

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<sup>325</sup> See, e.g., MCGARITY, *supra* note 1, at 148-49.

<sup>326</sup> E. J. MISHAN, COST-BENEFIT ANALYSIS 171 (1982) (“[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 262, at 10958 (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 *id.* 10964-65.

<sup>327</sup> See Driesen, *supra* note 15, at 589-92.

<sup>328</sup> See *id.* at 588-89 (explaining this in detail).

The choice of a discount rate also has an enormous effect upon the calculations of benefits.<sup>329</sup> But this choice amounts to “a value judgment about equity between generations.”<sup>330</sup>

Also, writers frequently point out that CBA is anti-environmental, because it gives short shrift to soft variables.<sup>331</sup> 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 important benefits cannot be quantified and monetized,<sup>332</sup> 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,

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<sup>329</sup> ACKERMAN & HEINZERLING, *supra* note 4, at 179-203 (discussing the discount rate choices and their impact); Lisa Heinzerling, *Costs of Mythic Proportions*, 107 YALE L. J. 1981, 1985 nn 8-10 (1998).

<sup>330</sup> 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 BOST. COLL. ENV'T'L AFF. L. REV. 555, 578-585 (2004) (discussing discounting's moral issues in the climate change context); Heinzerling, *supra* note 323; Revesz, *supra* note 323; Daniel A. Farber & Paul A. Hemmersbaugh, *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).

<sup>331</sup> 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 quantified and monetized.”); MCGARITY, *supra* note 1, at 134; Laurence H. Tribe, *Ways Not to Think About Plastic Trees*, 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).

<sup>332</sup> OMB, *supra* note 210, at 127.

CBA cannot be neutral because of the limits of monetization and the impossibility of any neutral monetization methods.<sup>333</sup>

#### 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,<sup>334</sup> a criterion that excludes cost considerations altogether, it still required EPA to listen to and respond to industry comments.<sup>335</sup> 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 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. And it 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

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<sup>333</sup> See, e.g., *Public Citizen v. Federal Motor Carrier Safety Administration*, slip. op. at 15 (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).

<sup>334</sup> See 42 U.S.C. § 7409(b)(1).

<sup>335</sup> See 42 U.S.C. § 7607(d)(1)(A),(3).

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.<sup>336</sup>

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.<sup>337</sup> 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.

#### 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.<sup>338</sup> 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

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<sup>336</sup> See Buzbee, *supra* note 8, at 358 (CBA gives officials “greater discretionary authority” by allowing them to “consider a virtually unlimited universe of societal costs and benefits.”)

<sup>337</sup> 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).

<sup>338</sup> See generally DAVID M. DRIESEN, *THE ECONOMIC DYNAMICS OF ENVIRONMENTAL LAW* 123-135 (2003) (explaining that fundamental facts about the shape of environmental problems and economic dynamics should influence environmental policy).

the problem they claim that regulation poses, overly stringent regulation in some cases and too little regulation in others.<sup>339</sup> It simply reduces the stringency of some regulation.

Those who view CBA as advancing “overall well being”<sup>340</sup> 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 that we should abolish the OMB, 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.<sup>341</sup>

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

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<sup>339</sup> See, e.g., SUNSTEIN, *supra* note 2, at 4-6. Accord BREYER, *supra* note 281.

<sup>340</sup> See Adler & Posner, *supra* note 5 (discussing the difference between the two concepts and advocating overall well-being as the test).

<sup>341</sup> 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 duplicate agency work or operate as “a *de novo* decisionmaker”).

how agencies can integrate them into a cost-benefit framework.<sup>342</sup> 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.<sup>343</sup> When monetized benefits are less than monetized costs, she notes, one cannot draw conclusions about whether or not total net benefits are positive.<sup>344</sup> 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 cannot 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 "an objective economists' cost-benefit test"<sup>345</sup> 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.

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<sup>342</sup> 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).

<sup>343</sup> *Id.*

<sup>344</sup> *Id.*

<sup>345</sup> See Hahn, *supra* note 6, at 3-4.

### 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 most of the relevant history. That sort of argument should be laid to rest.

**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)<sup>346</sup>

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

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

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

Consolidated Emissions Reporting Rule (EPA)

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

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)

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

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<sup>346</sup> This rule was subject to two formal reviews during this period. The twenty-five cases involve 25 reviews. See GAO, *supra* note 52, at 69 n. 1 (explaining that the GAO uses the term “rules” to refer to submissions under the executive orders and that OMB reviewed some rules more than once).

February 28, 2005

NEUTRAL CBA

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 (EPA)

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

Corrosion Control Plan (EPA)

Aging Airplane Safety (EPA)

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

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

Part 145 Review: Repair Stations (FAA)