REGULATORY CHECKBOOK

16 March 2009

The Honorable Peter Orszag
Director
Office of Management and Budget
Washington, DC 20503

Dear Director Orszag:

I am writing to provide comments and suggestions in response to the Office of Management and Budget's recent announcement in the Federal Register. I hope that this input will be useful as President Obama and his senior advisors consider possible changes to the presidential regulatory review process now government by President Executive Order 12,866.

These comments and recommendations reflect more than 20 years' experience in federal regulatory review and oversight, 10 of which I served as a career economist in OMB's Office of Information and Regulatory Affairs. That time was split in half, serving both Republican and Democratic presidents. As a veteran participant of this process, and since my departure from OMB a more dispassionate student of it, I believe I have learned valuable lessons about what works, what doesn't work, and why many well-intentioned process elements fail when put to the test. There is no question that presidential regulatory review can be improved. Unfortunately, the list of reform proposals that have a reasonable chance of success is considerably shorter than the list of suggestions that have been made. Many proposed reforms, especially those offered by academic scholars, look much attractive in theory than they would be in practice.

I have read many, but not all, of the public comments submitted to date. It is my sense that many of these comments are founded on strong policy views about what President Obama ought to substantively achieve during his term in office, or alternatively, criticism of the policy views of his predecessors. These comments are misdirected. Presidential regulatory review is a process, not a substantive outcome. It should ensure the President's interests are always and fully reflected in the actions of his appointees, to the extent that is permitted by law. However, it also should be as neutral as possible with respect to the substantive policy views of the President. Otherwise, the process will be perceived as unfair, biased, and neither legitimate nor appropriate.

I have attached to this letter a rather lengthy paper. I refute the critics of benefit-cost analysis as the preferred framework for regulatory analysis. However, at the same time I am well aware that it has not lived up to its promise. I attribute

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this to an unintended consequence of both Executive Order 12,866 and its predecessor, Executive Order 12,291 Agencies are directed to simultaneously submit to OIRA the draft rule and the supporting Regulatory Impact Analysis. This has led agencies to diminish the neutrality and objectivity of RIAs and turn them into advocacy briefs. The public regard for benefit-cost analysis is not enhanced by this, and the President's interests are poorly served as well. What the President and his senior advisors need most is an objective and dispassionate description of all benefits, costs, and other effects (including distributional effects) resulting from each reasonably feasible alternative. Executive Order 12,866 cannot achieve this because it integrates the analytical and policy-making components so seamlessly that it is often impossible to discern which parts are science and economics and which are policy advocacy.

I recommend that these processes be given an amicable divorce on grounds of mutual incompatibility. A new executive order should expedite the process of conducting analysis so that it is essentially complete before government officials consider what decision to make. The analytic process can be conducted in a highly transparent manner, without compromising the President's legitimate need for confidential policy advice, while encouraging active and extensive public participation. Government agencies may have a monopoly on the production of RIAs, but they have not begun to corner the market for analytical expertise.

OIRA already has the foundation for leading such a revised process: its existing statutory authority under the Paperwork Reduction Act. After all, the PRA requires public participation and transparency. President Obama's decision to revise Executive Order 12,866 provides a wonderful opportunity to breathe new life into the PRA and convert it from a sleepy procedural statute that hardly anyone has heard of and make it the dominant workhorse for the production of high-quality data, well-constructed and transparent models, and enriched benefit-cost analyses that make the extraordinarily difficult job of governing just a little bit easier.

Sincerely,

Attachment: "Presidential Regulatory Review: Suggestions for Reform"

Presidential Regulatory Review: Suggestions for Reform

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I. Executive Summary

This paper provides comments and recommendations concerning the President Obama's memorandum to agency heads announcing a review of the presidential regulatory review system and the Office of Management and Budget's request for public comment.[1] These comments generally follow the list of questions posed either by the President or by OMB in its request for comment. Some issues are emphasized more intensively than others—in particular, I focus a lot on the merits of benefit-cost analysis over the alternative analytic frameworks that have been proposed, and on process issues with which commenters who lack experience in the presidential regulatory review process would tend to be unfamiliar. The perspective throughout is that of a former career analyst who has served both Republican and Democratic presidents and sought to faithfully implement each president's stated regulatory principles.[2]

Section II concerns the oft-repeated claim that OMB's Office of Information and Regulatory Affairs unduly delays the publication of proposed rules and the promulgation of final rules. The data show persuasively that it does not do so on average, which leaves open the possibility that it does so in individual cases. I assert that OIRA career analysts are too few in number and too close to the President to delay any regulatory action contrary to the wishes of the President and his senior advisors. Delay occurs because of genuine policy differences, either across federal agencies or between an agency and the President.

Section III concerns the role of benefit-cost analysis in presidential regulatory review. I rebut opponents who claim that it is fundamentally biased, though I agree with them that it is often misused or used improperly. I note that the federal government has about 70 years of experience using benefit-cost analysis to evaluate federal projects under various laws. and about 40 years of experience using it to evaluate environmental impacts under the National Environmental Policy Act. The extension of this tool to regulatory analysis about 30 years ago was both natural and appropriate.

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[1] Obama (2009), Office of Management and Budget (2009).

[2] I served as a career economist in OMB's Office of Information and Regulatory Affairs from 1988-98. During this term of service, I earned multiple Division Performance Awards and a Special Achievement Award. Before coming to OIRA, I earned my MPP from the John F. Kennedy School of Government and my PhD from Harvard University. In 2001, I founded Regulatory Checkbook, a nonpartisan nonprofit organization whose mission is to enhance the quality of scientific and economic information used to inform regulatory decision-making. Regulatory Checkbook does not lobby, and does not take positions on substantive regulatory issues.

It is interesting to note that it was environmentalist and consumer activists who led the criticism of the improper use of benefit-cost analysis by federal construction and development agencies. The methodological errors that they identified as having been committed by federal development and construction agencies in the 1960s and 1970s are the same errors that others have identified as having been committed by federal regulatory agencies since the 1980s. The key factor that links these phenomena is that, in both cases, the agencies responsible for making policy, investment, or regulatory decisions also controlled the data, models, and levers of benefit-cost analysis. Thus, the underlying problem never was a defect in either the theory or the capacity to perform benefit-cost analysis well. The problem was, and continues to be, a fundamental conflict of interest between the job of performing objective benefit-cost analysis of regulation on the one hand, and making regulatory decisions on the other.

Among critics of regulatory benefit-cost analysis, a remarkable number of them display a persistent misunderstanding of both theory and methods in the field. Chief among the theoretical misunderstandings is the mistaken belief that *cost* is synonymous with *expenditure*. Whereas *cost* is an economic term borrowed by accountants, *expenditure* is a budgeting term invented for accountants that has no counterpart in benefit-cost analysis. It is universally agreed among practitioners that cost, properly understood, means *opportunity cost*, and opportunity cost means *benefits foregone*. This one error is responsible for a large percentage of the purported controversy.

Most of the remaining controversy concerns economists' efforts to devise tools for objectively valuing goods that are implicitly traded in markets (such as health protection) or not traded at all (such as air shed visibility). These are challenging problems to solve, and not every proposed remedy will stand the tests of peer review and analytic scrutiny. Nonetheless, it is fundamentally anti-intellectual to reject all efforts at valuation because it makes one uncomfortable or because one finds the techniques too complex to understand. Irrespective of whether economists continue to try to improve these valuation estimates, valuation still; will go on in the real world. Improving health or environmental quality is costly— that is, it requires the sacrifice of other benefits to obtain—and it is entirely appropriate for decision-makers to make every reasonable effort to understand these tradeoffs before they promulgate regulations.

The information quality paradigm, which has its origins in information management and was adopted by Congress through the Information Quality Act in 2000, offers a wealth of opportunities to improve the quality of benefit-cost analysis and all of the inputs that are relied upon to produce it. Inexplicably, many critics of the practice of benefit-cost analysis oppose the information quality paradigm as well. OIRA also has shown little interest in it, and the Obama Administration should use the opportunity of a new executive order to ratify its fundamental principles—that information is different from policy judgment; that information must always strive to be substantively objective and presented in an objective

manner; and that the subset of information that we call regulatory analysis should be as objective as possible to fully and impartially inform regulatory decision-making.

Historically, benefit-cost analysis has been focused on point estimates because obtaining point estimates is the first step toward richer portrayals of the consequences of regulatory actions. Also historically, federal agencies have quit performing analysis once they obtained point estimates. A new executive order should direct agencies to seek—and obtain—much more information about the distribution of effects at the household level. This information has practical utility across the board, but most importantly in those cases where economic efficiency (i.e., the maximization of net social benefits) can be achieved only at the expense of horizontal or vertical inequity.

Section III concludes with a discussion of several alternatives that have been proposed as replacements for the benefit-cost framework. With the notable exception of decision analysis, each of these alternatives is shown to be inferior. Some alternatives discard data; others embed regulatory policy decisions in the analytic framework; still others have fundamental internal inconsistencies.

Section IV discusses the role behavioral science can play in regulatory design, especially in circumstances where compliance is incomplete and enforcement is costly. In addition, a more fundamental question is raised: Can behavioral science inform the *design* of the presidential regulatory review process?

Section V addresses the eternally controversial question of OIRA's relationship to the agencies. Many wish that these relationships were never adversarial, but some amount of disagreement is inherent to any challenge function. I show that there are no credible alternative location for the presidential regulatory review process. A significant cadre of apolitical career analysts is essential, and OIRA already has statutory authority for managing the Paperwork Reduction Act. Even though it would be nice if OIRA career analysts had the time to ponder broader issues, as some critics recommend, this is not a credible alternative to transaction-based review. No one would seriously suggest empanelling a peer review committee to evaluate a grant proposal, a project, or a scholarly study, and then deny the panel the ability to review it. Yet that is what some have recommended to the President concerning the unique peer review function that is presidential regulatory review.

Finally, in Section VI I address the interrelated issues of disclosure, transparency, and public participation. Examining these issues in isolation is unwise, for there are clear tradeoffs among them that otherwise would be missed. I recommend that a new executive order divorce the analytic component of the regulatory review process from the decision-making phase. Forcing them to live together, despite their irreconcilable differences, undermines the President's legitimate need for confidential advice and the public's need for regulatory impact analysis that is objective, transparent, complete, and reproducible. By issuing this divorce, and expediting the analytic phase well before agencies are ready to make decisions, the analytic process can be fully transparent and provide a wealth of

opportunities for meaningful public participation. There is no single action the President could take that would more radically change regulatory review for the better.

II. Ensuring that Regulatory Review Does Not Produce Undue Delay

A widely reported criticism of the existing regulatory review process under Executive Order 12,866 is that it causes undue delay. It is alleged that OIRA career analysts "sit" on draft rules rather than process them promptly, or that OIRA "holds up" draft rules based on unpublished or otherwise nontransparent (but almost certainly political) criteria. Some support these opinions with hearsay or anecdote, but in never with the support of empirical evidence.

To be fair, the dearth of evidence is partly the result of the confidential character of the presidential regulatory review process. It is therefore asserted that if the process were stripped of its confidentiality, the occurrence of undue delay would cease. There is no obvious reason to believe this would in fact occur, and a strong basis for predicting that delay would in fact increase because the President and his senior advisors would find it much more difficult to obtain the candid and objective insights that they now get in confidence from the OIRA staff.

A. Does OIRA review cause undue delay?

Fortunately, OIRA discloses sufficient data to test the hypothesis that presidential review causes undue delay. On behalf of OIRA, GSA's Regulatory Information Service Center (RISC) records and publicizes data on all draft regulatory actions submitted to OIRA for review.[3] These data can be analyzed many ways, but they show that average review times have stayed below the 60-day threshold set in Executive Order 12,866 for many years. To support the charge that the OIRA process causes undue delay, one must either focus on unusual cases or begin from the premise that the mere existence of presidential regulatory review is "undue" delay by definition. If that were true, of course, presidential regulatory oversight could not be either legitimate or appropriate—a position that is contrary to the views expressed by President Obama. [4]

A recent monograph by Anne Joseph O'Connell published by the Center for American Progress shows that draft rules spend a small fraction of their

[3] See http://www.reginfo.gov/public/do/eoPackageMain.

[4] Obama (2009, p. 5977): "While recognizing the expertise and authority of executive branch departments and agencies, I also believe that, if properly conducted, centralized review is both legitimate and appropriate as a means of promoting regulatory goals."

development time in presidential regulatory review.[5] The average number of days between publication of a notice of proposed rulemaking (NPRM) and promulgation of a final rule is about 450 from 1983—2008 and 500 from 1995—2008, with small differences in the average noted for nonsignificant (vs. significant) and statutory/judicial deadline (vs. non-deadline) rules.[6] These differences may not be statistically significant; O'Connell reports only means and not standard deviations, and it is also is not obvious that the effect sizes implied by the reported differences are important.[7] Even NPRMs that agencies do not submit to OIRA for review take on average 300 to 400 days to complete, and these rules are too insignificant to warrant presidential regulatory review.[8]

Meanwhile, the average review time at OIRA has been less than 60 days throughout recent history. There simply is no credible evidence that the existing presidential regulatory review process causes undue delay.[9]

B. Do inflexible procedures help or harm the President?

When delay occurs (and of course it sometimes does), there are two primary causes: the need for interagency coordination and the absence of sufficient or objective regulatory analysis. The exercise of fixed time limits for presidential regulatory review inhibits the ability of the process to respond effectively to both of these circumstances.

1. Interagency coordination

Agencies are directed by Executive Order 12,866 to write regulations in ways that avoid conflict with the actions or missions of sister agencies.[10] However, under

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[5] O'Connell (2009). See also Gerson and O'Connell (2009).

[6] The time periods are not strictly comparable because Executive Order 12,866 replaced the definition of "major" in Executive Order 12,291 with the new term of art "economically significant." Why Gerson and O'Connell (2009) report averages with four significant digits and precision ± 0.05 days (1.2 hours) is not clear.

[7] *Effect size* refers to the practical importance of an observed difference. In scientific research, it is not reported as often as it should be. Studies with large amounts of data easily detect effects that are statistically significant, but it is not necessarily true that a statistically significant effect is also an important one. See, e.g., Hoaglin et al. (1982, p. 41) and Light and Pillemer (1984, pp. 55-57). Note that even though it is less than 4 percent of the total, Gersen and O'Connell (2009) characterize the 17-day difference in average process time between deadline and non-deadline rules as "important."

[8] "For non-significant actions with a deadline, the average duration is 310.8 days; for non-significant actions without a deadline, the mean duration is 395.1 days." See Gerson and O'Connell (2009, p. 1).

[9] Gerson and O'Connell (2009) make several recommendations for how President Obama should change this process. None of these recommendations appears to be based on the empirical analysis performed by O'Connell (2009).

the current regulatory planning process the burden of identifying potential conflicts falls on the most senior appointee in each *sister* agency, not on the agency authoring a draft rule.[11] The heads of sister agencies must raise the issue with the OIRA Administrator *in writing*. These requirements are both bureaucratically burdensome and politically expensive. One would expect that the number of such written notifications sent to OIRA since 1993 is much smaller than the number of actual interagency conflicts.

Furthermore, because this process is so costly it should not be surprising that senior officials of sister agencies do not discover potential interagency conflicts during the planning process and only become aware of them, if at all, during the OIRA regulatory review. At this late date, resolving interagency concerns is much more difficult and time consuming. The amount of time OIRA is allowed to perform its review, however, is insensitive to whether its responsibilities also include interagency coordination with senior officials of sister agencies.

Agencies sometimes delegate to OIRA the task of conducting interagency review instead of doing it themselves before submitting draft rules for review, and OIRA cheerfully accepts this added duty. This can be a smart choice for everyone. OIRA may be much better positioned to coordinate agencies' disparate views and ensure that they are resolved expeditiously—more expeditiously, in fact, than the agencies can do themselves. This efficiency gain arises from OIRA's proximity to the President and its comparative advantage serving as an honest broker ensuring that every agency's interests are faithfully reported to the President or his senior advisors. In addition, OIRA career analysts often are assigned the task of ensuring that interagency policy-level agreements are implemented. As I note in Section V.A below, interagency regulatory coordination is one of OIRA's primary institutional roles even if it does not get as many "column inches" in Executive Order 12,866 as other aspects of the presidential regulatory review process.

Obviously, interagency coordination represents significant duties that go well beyond the normal responsibility of reviewing a draft rule and evaluating an agency's regulatory analysis. Unfortunately, the statistics collected by OIRA and reported by RISC do not include any notation concerning whether interagency review was a significant element of the review OIRA performed.[12] Logic suggests

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[10] "Each agency shall avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations or those of other Federal agencies" (Executive Order 12,866, § 1(b)(10), emphasis added).

[11] "An agency head who believes that a planned regulatory action of another agency may conflict with its own policy or action taken or planned shall promptly notify, in writing, the Administrator of OIRA, who shall forward that communication to the issuing agency, the Advisors, and the Vice President" (Executive Order 12,866, § 4(c)(4), emphasis added).

[12] Because they rely on the same data, the empirical results reported by O'Connell (O'Connell 2009) and Gersen and O'Connell (2009) thus do not take account of the added time

that for a large fraction of draft rules with well above average review times, interagency coordination was a significant factor. A revised executive order should make it much easier for sister agencies to raise concerns in the regulatory planning process (which occurs early) so that no one is surprised if they come up during regulatory review (which occurs late). Furthermore, agencies should have a much greater responsibility for identifying potential interagency conflicts or concerns and working to resolve them before regulatory development has proceeded very far. If they do not take these steps, it is hard to imagine how they can "avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations or those of other Federal agencies," as Executive Order 12,866 directs them to do.

2. Insufficient or inadequate regulatory analysis

Obviously, regulatory analysis is essential for understanding the likely consequences of regulation. But Executive Order 12,866 does not actually require agencies to conduct a Regulatory Impact Analysis unless they (or OIRA) have classified a draft rule as "economically significant."[13] For draft rules classified as "significant," a much less demanding analytic test applies.[14] This asymmetry creates perverse incentives.[15]

The regulatory review process is delayed when OIRA career analysts discover that they are missing potentially crucial information, or that there are material defects in an agency's regulatory analysis. Considerable time can be spent seeking additional information, including additional regulatory analysis. For example, a common problem is that the array of alternatives examined by the agency is structurally unsatisfying. Alternatively, the analysis may utilize scientific information in ways that are incompatible with benefit-cost analysis.[16]

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required to perform interagency coordination. Indeed, the topic of interagency coordination is missing from their analyses.

[13] Executive Order 12,866, § 6(a)(3)(C).

[14] Executive Order 12,866, § 6(a)(3)(B).

[15] The difference is sufficient to motivate agencies to split "economically significant" regulatory actions into multiple parts, each of which is not "economically significant." Alternatively, agencies can misclassify an "economically significant" draft rule as "significant." In both cases, agencies can save regulatory development costs and reduce the intensity of presidential regulatory review if it goes undetected by OIRA career analysts. Even if detected, OIRA career analysts must elevate the matter to the OIRA Administrator, who then has to consume scarce time policing a purely administrative detail.

This issue also is discussed in Section V.B below.

[16] A structural unsatisfying analysis might include options that are extreme or unreasonable, such as a "straw man" alternative that no one considers seriously. Or the alternatives examined might differ on multiple dimensions such that decision-makers cannot discern the incremental effects of changing just a single parameter. A common example of scientific information that is

A revised executive order should be sensitive to these peculiar conditions because it can be predicted with confidence that the length of time required to conduct a proper review will be greater if one or both conditions is present. Executive Order 12,866 does not make any distinctions—the deadline is 90 days irrespective of underlying conditions.[17] The debate over whether presidential regulatory review causes "undue" burden has thus far failed to take these conditions into account, so any inferences drawn from the available data (which also do not take these conditions into account) are inherently speculative.

A revised executive order should take advantage of neatly three decades of experience by explicitly accounting for these circumstances in the establishment of a default review time. Here are three possible choice architectures:

- Specify a longer default review time for any draft rule in which significant interagency coordination is required. "Significant" could be triggered, for example, if a sister agency's Regulatory Policy Officer (required by § 6(a)(2)) formally identifies a draft rule as raising interagency concerns.
- Allow authoring agencies to choose a review time at the time they submit each draft rule. For example, an agency could acknowledge up front that OIRA will need to coordinate interagency concerns or that there are likely to be concerns about the agency's regulatory analysis, either of which will require more time than usual to resolve. In return for enabling agencies to make these choices, OIRA would have to have an automatic procedure for dealing with instances in which an agency's choice is incompatible with the discovered facts.[18]
- Provide a simplified tool enabling senior OIRA career staff (such as branch chiefs) to extend review time without having to involve the Administrator, accompanied by public disclosure of the general reasons for the extension. I have identified interagency coordination and analytical deficiencies as the two dominant reasons for delay. Branch chiefs could easily make these non-substantive determinations. The procedure specified in Executive Order 12,866 is in practice less transparent than it was intended to be, perhaps because the circumstances under which additional time would be needed were not fully understood at the time it was issued.

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incompatible with benefit-cost analysis is a risk assessment that characterizes only the reasonable worst case. This is discussed in more detail in Section III.D below.

[17] Executive Order 12,866, § 6(b)(2)(C) says "[t]he review process may be extended (1) once by no more than 30 calendar days upon the written approval of the Director and (2) at the request of the agency head." This provision is burdensome and nontransparent concerning the reasons for additional review time, and in any case, previous Administrators have occasionally extended review beyond 120 days in violation of the actual language.

[18] Examples of incompatibilities might include, inter alia, the discovery of previously unidentified or unresolved interagency concerns or material deficiencies in regulatory analysis.

- Authorize the OIRA Administrator to stop the tolling of the clock on presidential regulatory review when specific circumstances arise. This would place the burden of taking action on the OIRA Administrator, a political appointee, to take actions that are purely administrative.

In any case, OIRA's database would have to be modified so that unusual circumstances are noted, thus enabling analysts to take account of them in their empirical work.[19]

III. The Role of Benefit-Cost Analysis

Benefit-cost analysis is the standard tool for evaluating projects, investments, and regulations.[20] Properly implemented, it is neutral with respect to the values of decision-makers and does not discriminate in favor (or against) any particular policy choices. By convention, benefits, costs and other effects (such as transfers) are monetized to the extent practicable to make aggregation and comparison simpler. Some other unit could be used instead so long as its meaning were clear and the practical ability to see tradeoffs was self-evident. In World War II Axis prisoner of war camps, where conventional "money" did not exist, cigarettes became both the medium for exchange and the unit that was used to compare alternatives (such as they were for POWs).[21]

A. Is benefit-cost analysis an inherently biased tool?

It has been alleged that benefit-cost analysis systematically benefits some groups over others. For example, it is described as "a powerful weapon in the hands of vocal opponents of regulation," riddled with "built-in biases" in favor of those who "strive[] only to make money."[22] Others also object to the standard practice of

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[19] Simple check boxes for significant interagency coordination and material deficiencies in regulatory analysis would be easy to implement. Moreover, it would be relatively simple to review the existing database and add these new data elements.

[20] "Benefit-cost analysis" and "cost-benefit analysis" are the same thing. Historically, OIRA has preferred "benefit-cost analysis. See, e.g., Office of Management and Budget (2003).

[21] Radford (1945) described the economics of the POW camp from personal experience. He notes that while the economy was unregulated, it had stable prices and universal confidence. The prisoners established a restaurant and shop, and eventually a form of paper money backed 100 percent by food stocks, which themselves were convertible to cigarettes. The "money" supply experienced deflationary waves because cigarettes, unlike conventional money, also were consumed for their principal purpose. An attempt was made by a British medical officer to force a planned economy, ostensibly for the purpose of protection prisoners from themselves ("The Medical Officer had long been anxious to control food sales, for fear of some people selling too much, to the detriment of their health.") This effort eventually failed because the medical officer could not prevent side transactions or control the money supply.

[22] Ackerman and Heinzerling (2004, pp. 35-36).

basing valuation on willingness-to-pay (WTP), preferring instead willingness-to-accept (WTA) and other methods that proceed from the premise that individuals have rights to safety, freedom from pollution, and similar goods.[23] Elsewhere, they characterize benefit-cost analysis as "sophisticated sabotage," a system of analytic methods that "attempt to redefine the meaning of regulation so that the chief concern is no longer the moral grievances and physical harm of victims, but the economic priorities of industry."[24]

WTA and similar methods can make health, safety and environmental protection more difficult because, applied correctly, they make changes from the status quo more difficult. Meanwhile, advocates for health, safety and environmental protection have wholeheartedly embraced benefit-cost analysis as a preferred strong rule for rejecting public projects. Uncertainties about unquantified benefits, estimation challenges—especially the valuation of health, safety and environmental benefits— tend to be discounted.

1. Seventy years of experience in federal project evaluation

The first generally recognized U.S. government decision involving benefit-cost analysis occurred no later than 1937, when the Flood Control Act of that year directed the U.S. Army Corps of Engineers to evaluate alternative flood control projects using benefit-cost analysis. This requirement has been a routine provision in federal water projects management ever since.[25]

The language in the Flood Control Act is not perfect. For example, it gives too much emphasis to benefit-cost *ratios* rather than net social benefits as the criterion for approval. This practice has the effect of ignoring project scale. A large number of projects with benefit-cost ratios barely exceeding unity may not yield as much net social benefit as a smaller number of larger projects each of which has a greater excess of social benefits over social costs. By emphasizing benefit-cost ratios, however, Congress avoids the prospect of making alternative projects compete for scarce funds and enables it to allocate federal funds across a larger number of States and congressional districts. Critics of benefit-cost analysis looking for examples in which the method has been politicized need look no further.

Critics of how the agencies implemented benefit-cost analysis abound, not least of which among environmentalists who strongly believe in the value of benefit-

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[23] See McGarity (1991). Ironically, fellow critics Ackerman and Heinzerling complain that WTP-based valuation is biased *in favor of* the status quo. See Ackerman and Heinzerling (2004, p. 36): ""Even when [benefit-cost analysis] is applied in good faith by neutral or environmentally inclined investigators, … the results tilt strongly toward endorsement of business as usual…"

[24] McGarity et al. (2004, p. 5),

[25] Earmarking is rarely necessary to secure funding for projects that would pass a net-benefits test. Members of Congress must resort to earmarking when they expect that projects they wish to fund would have more costs than benefits.

cost analysis as an aid in decision-making elsewhere. An early and persuasive critique of the Bureau of Reclamation's misuse of benefit-cost analysis was produced by a Ralph Nader-affiliated study group.[26] Several "analytic deceptions" were identified, including the exaggeration of social benefits, including rampant double-counting; the underestimation of social costs, especially by failing to count foregone benefits of alternative uses of government funds; and the use of artificially low discount rates to give excess weight to long-delayed benefits relative to immediately borne construction costs. Interestingly, they also criticized the Bureau for ignoring the extent to which projects imposed distributional costs on the rural poor, most notably Indians.

No part of this critique includes even the most remote suggestion that benefit-cost analysis be abandoned or replaced by some other analytic tool. Rather, the authors recommended that benefit-cost analysis be performed *properly*, without embedded biases favoring project approval. Chief among their specific recommendations was that the government's Water Resource Council Handbook be revised and updated to reflect technically correct methodology. This Handbook has been modified several times and continues to improve in technical quality.[27]

The importance of benefit-cost analysis, and performing it correctly, was underscored in the preface, authored by Ralph Nader:

> An intriguing inquiry which will not be answered until more official monitoring of [the Bureau of] Reclamation by Congress occurs: how could the Bureau's economists and other professional employees and consultants have countenanced such specious economic rationales and such dubious projects? What kind of professional independence has been repressed by the pressures of a single-minded bureaucracy? These are critical questions because they relate to one of the principal internal checks on runaway government policies, waste, and unchallenged special interest pressure groups.[28]

2. Forty years of experience in environmental impact assessment

The government's use of benefit-cost analysis to evaluate water projects is not the only arena in which it has a statutory basis for environmental protection. The most expansive of all environmental statutes—the National Environmental Policy Act (NEPA)—includes provisions that have long been understood to require

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[26] Berkman and Viscusi (1973).

[27] See U.S. Department of Agriculture (1994). This version is labeled "draft." See http://www.economics.nrcs.usda.gov/technical/econhandbook/index.html. The Water Resources Council is established under 18 C.F.R. Part 700, and was established pursuant to § 402, Pub. L. 89–80.

[28] Ibid., p. x.

benefit-cost analysis. The Council of Environmental Quality's implementing regulations explicitly require it under a broad array of circumstances:

> If a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by reference or appended to the statement as an aid in evaluating the environmental consequences. To assess the adequacy of compliance with section 102(2)(B) of [NEPA] the statement shall, when a cost-benefit analysis is prepared, discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values, and amenities. For purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations. In any event, an environmental impact statement should at least indicate those considerations, including factors not related to environmental quality, which are likely to be relevant and important to a decision.[29]

An agency's failure to perform (or perform adequately) a benefit-cost analysis as part of an Environmental Impact Statement is grounds for stopping a project dead in its tracks. The Environmental Protection Agency has a unique and extensive role in reviewing other agencies' adherence to NEPA requirements, including the general requirement to prepare benefit-cost analyses. For example, the most recent comment in EPA's database of Agency comments, dated November 28, 2008, shows that EPA strongly endorses benefit-cost analysis as a routine tool or evaluating the environmental effects of other government agencies' proposed projects. Commenting on the Deerfield Wind Project Draft Environmental Impact Statement, EPA Regional Administrator Robert Varney wrote that the U.S. Forest Service needed to expand the array of alternatives it examined and extend its EIS accordingly:

> The analysis should provide enough information to allow for a comparison of the relative environmental impacts, benefits and costs across all alternatives.[30]

Advice such as this is routinely provided by EPA and routinely followed by other government agencies. EPA itself, however, is largely exempt from NEPA.[31]

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[29] 40 C.F.R § 1502.23.

[30] See Robert W. Varney, U.S. EPA Regional Administrator, letter to Margaret Mitchell, Forest Supervisor, Green Mountain National Forest, Manchester Ranger District, "Deerfield Wind Project Draft Environmental Impact Statement, Towns of Searsburg and Readsboro, Vermont [CEQ# 20080383]," online at http://yosemite.epa.gov/oeca/webeis.nsf/(PDFView)/20080383/$file/20080383.PDF?OpenElement.

[31] On its NEPA web page, EPA explains the sources of its exemption:

3. Thirty years of experience in regulatory analysis

Benefit-cost analysis requirements for federal regulation are usually associated with Executive Order 12,291 issued by President Reagan in 1981. That directive clearly expanded the domain of regulations for which Regulatory Impact Analyses were formally required.[32] However, the practice began during the Nixon administration and was expanded during the Ford and Carter administrations. Books have been published describing reviews performed by the Regulatory Analysis Review Group within the Council of Price and Wage Stability.[33]

Indeed, benefit-cost analysis has become a conventional part of the regulatory development process at most Executive branch agencies. Of course, some agencies are more accustomed to the procedure and have invested substantial resources making it routine.[34] Others have not, and continue to struggle with seemingly elementary principles. An important reason why they struggle is that OIRA often allows them to meet very low quality standards.[35]

> "EPA is legally required to comply with the procedural requirements of NEPA for its research and development activities, facilities construction, wastewater treatment construction grants under Title II of the Clean Water Act (CWA), EPA-issued National Pollutant Discharge Elimination System (NPDES) permits for new sources, and for certain projects funded through EPA annual Appropriations Acts.
>
> "Section 511(c) of the CWA exempts other EPA actions under the CWA from the requirements of NEPA. Section 7(c) of the Energy Supply and Environmental Coordination Act of 1974 (15 U.S.C. 793(c)(1)) exempts actions under the Clean Air Act from the requirements of NEPA. EPA is also exempted from the procedural requirements of environmental laws, including NEPA, for comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response actions. Courts also consistently have recognized that EPA procedures or environmental reviews under enabling legislation are functionally equivalent to the NEPA process and thus exempt from the procedural requirements in NEPA."

[32] In the ten months of 1981 after Executive Order 12,291 was signed, Executive branch agencies proposed or promulgated 2,789 regulations, 60 of which were "major." See http://www.reginfo.gov/public/do/eoCountsSearchInit?action=init. Few of these major rules were accompanied by Regulatory Impact Analyses.

[33] See, e.g., White (1981), Fromm (1981), and Clark et al. (1980).

[34] Some agencies have established extensive procedures and internal guidance for the conduct of benefit-cost analysis, See, U.S. Environmental Protection Agency (2000). Others, such as the Department of Homeland Security, rarely perform benefit-cost analysis irrespective of the scale or scope of a draft regulation. Sometimes DHS justifies its failure to perform analysis on unusual technical difficulties (e.g., preventing terrorism) that, properly understood, make analysis especially crucial (achieving net benefits from anti-terrorism regulations is arguably more important than to achieve more mundane public goods). In other cases, however, DHS simply does not do benefit-cost analysis because it does not want to; immigration regulations come immediately to mind.

[35] OIRA's tolerance of low quality is not always voluntary. During the 1980s, OIRA career analysts challenged the Department of Agriculture's failure to conduct credible benefit-cost analysis in support of its various marketing orders. Marketing orders are peculiar regulatory instruments,

Executive branch agencies naturally vary in their capabilities and performance in benefit-cost analysis. However, there is one class of government agencies that consistently performs at substandard levels: the independent agencies and commissions that are exempt from presidential regulatory review under Executive Order 12,866. OIRA submits annual reports to Congress on the benefits and costs of federal regulation, and these reports ably demonstrate that the independents are particularly disinclined to perform even the most rudimentary benefit-cost analysis. The 2007 Report to Congress is illustrative: OIRA reports that it is aware of 10 major rules promulgated by one of the independents during FY 2007.[36] OIRA reports that "information on benefits or costs" was reported for seven of the 10 rules; "some" costs were monetized four of the ten; and "some" benefits were monetized two of the ten.[37] OIRA is completely silent on the quality of any of these estimates—a reasonable decision, inasmuch as it did not review any of them under Executive Order 12,866.

B. Do its critics routinely misunderstand benefit-cost analysis?

Benefit-cost analysis is an entirely conventional tool for analyzing the likely impacts of decision-making. Properly conducted, a benefit-cost contains a complete and objective characterization of all the consequences expected to result from each alternative examined. Desirable consequences are called *benefits*, and benefits include such things as improvements in health, safety, or environmental protection. Some consequences are adverse and are typically called *costs*. Unfortunately, the concept of *cost* is poorly understood by many, including scientists and physicians, lawyers and politicians, and political activists. *Cost* is not a synonym for *money*. Properly understood, *cost* means the *value of benefits foregone* due to the commitment of scarce resources toward achievement of the regulatory objective. Although the term would be awkward to use in regular discourse, benefit-cost analysis could be renamed *benefits-benefits foregone analysis*.

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first established by the Agricultural Marketing Agreement Act of 1937, that enable incumbents within an industry to legally conspire to reduce supply, raise consumer prices, and keep out competitors. USDA operates marketing orders on behalf of almonds, apricots, avocados, sweet and tart cherries, Florida and Texas citrus, cranberries, dates, grapes, hazelnuts, kiwifruit, nectarines, olives, onions from four different regions, peaches, Oregon and Washington pears, pistachios, plums and prunes from California and Washington, Potatoes from several regions, raisins, spearmint oil, tomatoes, and walnuts. After OIRA engaged, Congress acted by inserting a rider in its annual appropriations bill prohibiting it from spending any money overseeing agricultural marketing orders. That rider has persisted ever since.

[36] OIRA obtains its information from the Government Accountability Office. Even though it is statutorily required to report to Congress on the regulatory activities of the independents, it does not have in place any system for obtaining this information directly. The count of 10 major rules excludes rules promulgated to assess fees.

[37] U.S. Office of Management and Budget (2009, pp. 18-19, Table 1-7).

Another common misunderstanding about costs is the notion that they are easier to estimate than benefits.[38] This is only true if costs are thought to be the same thing as *expenditures*. Economists, regardless of their policy views, agree that expenditure is not an accurate proxy for cost. Properly understood, cost means *opportunity cost*—"the value of the foregone alternative action."[39]— in other words, *benefits foregone*. However difficult is may be to estimate the benefits accruing from a regulation, it is harder to estimate the benefits foregone, and thus it is harder to estimate costs.[40] What critics seem to have discovered is it is much easier to estimate costs badly than to estimate them well, and the agency benefit-cost analyses they have reviewed tend to rely on estimate costs badly.

For the same reason, it is simply not true that there generally are more (or more important) unquantified or unquantifiable benefits than unquantified or unquantifiable costs. Critics of benefit-cost analysis often say it misses huge unquantified or unquantifiable benefits but rarely acknowledge unquantified or unquantifiable costs. They are quick to note the unquantified or unquantifiable benefits of regulations intended to enhance health, safety or environmental regulation, but slow to recognize the unquantifed or unquantifiable costs resulting from associated reductions in economic liberty.[41]

Benefit-cost analysis relies on consumers' willingness-to-pay (WTP) to value benefits such as life-saving and other forms of risk reduction. Some critics say willingness-to-accept (WTA) should be used instead, but this position seems to be based on the misimpression that WTA is much greater than WTP. This is not true; for small changes in welfare, WTP and WTA are virtually identical, differing only with respect to whether they approximate consumer surplus by way of compensating or equivalent variation. For small changes in risk, such as a one in 100,000 chance of experiencing (or avoiding) an adverse health effect, compensating and equivalent variations are expected to be essentially the same. The alleged controversy over WTP versus WTA is thus a red herring. Nevertheless, it is

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[38] This view is held and frequently advanced by such critics as Ackerman and Heinzerling (2004, pp. 39-40), who use a "six degrees of separation" model to associate benefit-cost analysis with Fascism (pp. 31-35).

[39] Pearce (1981, p. 316).

[40] For an example of how some economists fail to distinguish between expenditures and opportunity cost, see Ackerman (2009, "cost-benefit analysis often finds that the cost side of the balance involves expenditures with well-defined prices"). The book-length critique of benefit-cost analysis by Ackerman and Heinzerling (2004) makes the same error, and does not discuss opportunity cost.

[41] Some regulations reduce noneconomic liberty—for example, regulations restricting access to abortion or permitting government wiretapping of international phone calls. The opportunity costs of losing noneconomic liberty may well be very large, and in any case, it is extremely difficult to estimate.

frequently cited as some sort of "smoking gun" proving that benefit-cost analysis is wrong and immoral.

A short vignette is illustrative. Two critics of benefit-cost analysis try to discredit benefit-cost analysis by referring to a mean estimate of $883,000 to avoid a case of chronic bronchitis, correctly noting that U.S. EPA peculiarly used this figure as the basis for its estimates of the benefits of reducing arsenic in drinking water.[42] What these critics do not acknowledge is that the study EPA relied upon was never intended to be used for any regulatory purpose. It was a mall-intercept style survey, a design having no statistical properties allowing results to be generalized, irrespective of any other desirable qualities it might have. Moreover, the study was *not* performed to estimate the value of preventing chronic bronchitis. It was performed to test an innovative contingent valuation method in which respondents could make risk-risk rather than risk-dollar tradeoffs, which the study authors acknowledged was a "more difficult task." Thus, the purpose of the study was to improve the validity and reliability of contingent valuation estimates. They even warned against using their work the way EPA did:

> While the results of the application of our new morbidity valuation methodology to chronic bronchitis are encouraging, much further research is needed before applying the methodology to give estimates precise enough to be used in regulatory analyses.[43]

The critics miss all of this. Instead of correctly describing it as a misapplication of high-quality scholarly research, they ridiculed by name the lead author of the study for trying to improve the way health effects are monetized. Indeed, they decry any and all efforts to quantify the value of saving lives and improving health:

> [W]ho among us has well-defined, numerically precise preferences about hypothetical tradeoffs between the cost of living and the risk of bronchitis? How many of us might fail the economists' new literacy test for public policy decisions?[44]

Whether or not an effort is made to estimate the value of real but hard-to-measure benefits like health-risk avoidance and environmental protection, people will continue to implicitly place values on these things. They will continue to make real tradeoffs when faced with decisions to make and limited resources. There is something deeply anti-intellectual about holding as a sacred principle that

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[42] Ackerman and Heinzerling (2004, pp. 94-97).

[43] Viscusi et al. (1991, p. 50, emphasis added).

[44] Ackerman and Heinzerling (2004, p. 96). The lead author they ridicule—Vanderbilt University law professor and economist W. Kip Viscusi—was a co-author of the Ralph Nader funded expose of the Bureau of Reclamation's abuses of benefit-cost analysis mentioned in Section III.A.1 above.

ignorance is preferred to knowledge, and that when government officials have the responsibility to make decisions involving complex tradeoffs it is ethically appropriate that they make these choices from a position of ignorance.

C. Why has benefit-cost analysis been controversial in some applications but not in others?

Benefit-cost analysis has been controversial when applied to federal projects and regulations, but much less so in the NEPA context. The reason seems obvious: NEPA is a procedural statute that compels federal agencies to perform analysis but does not prescribe what alternative agencies must select. In the case of water projects and other investment activities, statutes and rules prescribed that projects must pass a normative benefit-cost test to be eligible for funding. Similarly, Executive Order 12,866 (like its predecessor, Executive Order 12,291) established a default regulatory policy principal that regulations should maximize net benefits to society, although taking account of other factors such as distributional considerations.[45]

In both the federal funding and regulatory policy examples, decision-making is normatively linked to benefit-cost analysis. This is not necessarily bad—indeed, it is an entirely defensible default procedure—but it does create incentives for mischief. Indeed, the same complaints that Ralph Nader and colleagues raised in the early 1970s about the way the Bureau of Reclamation misused benefit-cost analysis to justify water projects have been made about the way regulatory agencies misuse benefit-cost analysis to justify regulation. In both cases, agencies have powerful incentives to overstate or double-count benefits, understate costs (in part by counting expenditures instead of benefits foregone), and apply artificially low discount rates so that long-delayed benefits get a higher weight than they should. They have these incentives because they understand that there is an intrinsic linkage between the results of the benefit-cost analysis and the decision-making outcome.

Presidential regulatory review cannot prevent mischief like this from occurring, but without transaction-by-transaction review, the quantity of mischief would increase by leaps and bounds. Much has been accomplished over the past three decades to clear out the weeds of especially egregious practices. However, in an unregulated "free-market" equilibrium, regulatory benefit-cost analysis would quickly deteriorate in quality and look no better than what the Bureau of Reclamation used to generate and which aroused so much controversy in years past.

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[45] Executive Order 12,866, § 1(a): "in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). unless a statute requires another regulatory approach."

Mischief is not inherent to benefit-cost analysis, however. Rather, it is inherent to the system of producing benefit-cost analyses that Executive Order 12,866 has unwittingly fostered. Far too much scarce OIRA career staff time is wasted detecting and policing mischief, thus creating unproductive controversy and slowing down the review process. When tasked with producing the objective benefit-cost analysis that Executive Order 12,866 requires—or its necessary inputs, such as objective risk assessment—regulatory agencies are inherently conflicted by their bureaucratic interest in making preferred regulatory choices appear more attractive than they really are. Moreover, Executive Order 12,866 makes them monopoly providers of this vital product. No one else is allowed to compete. In a peculiar version of Gresham's Law, low quality drives out high quality from commerce.[46]

In Section III.H below, I offer a proposed remedy that if adopted would dramatically reduce analytic mischief and improve the efficiency and effectiveness of presidential regulatory review. The chief features of this proposed remedy involve disentangling the analytic tasks from decision-making, replacing the government monopoly with open competition in the performance of these analytic tasks, and stopping the practice of using analysis to support and defend decisions rather than to inform them.

D. How does risk assessment fit within the benefit-cost framework?

Estimates of both benefits and costs often entail scientific, technical, or statistical information gleaned from other disciplines. For a benefit-cost analysis to provide an objective portrayal of the consequences of regulatory action, it is crucial that all of the inputs to an analysis also be objective. No economist, regardless of training, skill, or experience, can produce an objective benefit-cost analysis if forced to rely on scientific, technical, or statistical information that is not objective. For that reason, a new executive order should include explicit language that requires agencies to rely on the best available objective information and scrupulously avoid using information that is inaccurate, unreliable, invalid or biased.[47]

In Section III.C I noted that governmental benefit-cost analysis had become controversial in each area where the results of analyses feed directly into decision-making. This phenomenon also occurs with respect to much human health and

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[46] For an explanation of Gresham's Law see Pearce (1981, p. 178) or Wikipedia at http://en.wikipedia.org/wiki/Gresham%27s_law. Metaphorically, high-quality benefit-cost analysis is like "good money," the value of which in exchange is the same as its market value. Low-quality benefit-cost analysis is like "bad money" because its market value is much less than its exchange value. Low-quality benefit-cost analysis is a debased currency. Executive Order 12,866 created a "circulating currency" of benefit-cost analyses in which the debased currency dominates.

[47] A similar point is made by Viscusi (2009).

environmental risk assessment. When a distinguished committee empanelled by the National Academy of Sciences first dealt with this matter in the early 1980s, they recommended that a clear conceptual distinction be maintained between the scientific and policy components of risk analysis and that the policy components of risk assessment be made explicit and transparent. The committee also recommended that risk assessors (who were responsible for the objective technical assessment) interact closely with risk managers (who were responsible for exercising congressionally delegated legislative policy judgment) to ensure that risk assessments had practical utility for the decisions that officials were required to make.[48]

Over the years, each of these recommendations has been lost to history.[49] The *assessment* of risk, which ought not be biased or subject to political interference, has become in many cases indistinguishable from the process of the inherently policy-driven activity of *managing* risk.[50] Unbiased are needed from risk assessment as inputs to benefit-cost analysis, for it is impossible to value improvements (or decrements) in health or environmental protection without knowing how much of these benefits or costs accrue (and sometimes to whom).[51] Independent scholars and OIRA alike have known for decades that the products of conventional human health risk assessment are biased—often purposefully so—to overstate risk magnitudes.[52] That the problems identified in the scholarly literature decades ago still persist, and are actively defended by some federal agencies,[53] shows that Executive Order 12,866 has not aligned agencies incentives with the needs of the President and his senior advisors.

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[48] National Research Council (1983).

[49] See, e.g., North (2003).

[50] Critics from both the Right (e.g., Gough 2003) and the Left (e.g., Wagner and Steinzor 2006) complain that the scientific components of risk assessment have been politicized.

[51] Proposals to supplant benefit-cost analysis with, say, the Precautionary Principle or "pragmatic regulatory impact analysis" also need risk assessment information as inputs. If anything, they have a more intense need because they rely almost exclusively information about risk. Thus, objective risk assessment is at least as crucial for the alternative analytic frameworks as it is for benefit-cost analysis.

[52] For early scholarly recognition of the embedded upward biases in human health risk assessment that make it incompatible with objective benefit-cost analysis, see Nichols and Zeckhauser (1986), Belzer (1991), and Kopp et al. (1997). For early OIRA acknowledgements, see U.S. Office of Management and Budget (1990a) and Katzen (1995). Zeckhauser (2009) reports that his views have not changed.

[53] For a candid acknowledgement that human health risk is intended to overstate likely risks, see U.S. Environmental Protection Agency, Office of the Science Advisor (2004), especially pp. 11-12.

The lack of objectivity in risk assessment has exacerbated controversies about benefit-cost analysis, and to a great extent, diverted attention away from the extent to which economists are compelled by necessity to rely on biased information for critical analytic inputs. Of the reference works describing the theory and practice of benefit-cost analysis, *none* of them tell practitioners to use purposefully biased data and methods to estimate benefits or costs. Of the handful of reference works describing the theory and practice of risk assessment, *all* of them at least implicitly tell practioners to use biased data and methods.

E. How does information quality fit within the benefit-cost framework?

"Information quality" has become something of a lightning rod for political controversy. It shouldn't be.

1. The information quality paradigm

Information quality is a relatively new field, the existence of which is a product of the ongoing revolution in information technology. Whereas it used to be that people could credibly say that they didn't have enough information to make a decision, today's problem is too much information without any way to decide which of it is important and useful and which is not. Even that problem is complicated by the fact that information can be unimportant or useless in once context but vital in another.

Information quality experts offer two propositions about information quality that can readily adapted for application to the regulatory development process:

1. Agencies must create a reservoir of quality information; and
2. Agencies must create a wealth of organizational knowledge.[54]

This involves a complex set of activities whose purpose is both to cultivate knowledge and ensure that the knowledge base is valid and reliable for its intended purposes, and resistant to misuse for uses to which it was not intended. To make this abstract concept concrete, think of computer software that automatically recognizes the user's platform (e.g., Windows, Macintosh, or Linux) and operating system (e.g., Windows XP or Vista; OS X Leopard or Tiger?), searches for existing versions to replace or amend, performs the necessary tasks (in the background if possible), forces a soft reboot only if necessary, and installs the udders many preferences so as to make the transition as simple as possible. We have become so accustomed to this that we do not recognize the brilliance of the information quality infrastructure that makes all this possible, all without installing the wrong version or a version for the wrong platform.

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[54] Huang et al. (1999).

Executive Order 12,866 is based on an information quality infrastructure that existed in the 1970s.[55] It is incapable of managing the extraordinary volume of information now available from any laptop computer or smart phone. It is even less able to discern the quality of most of this information. Quality information resides in a giant ocean of knowledge; the regulatory development task requires active fishing, with gear appropriate for the species of interest and mechanisms for minimizing bycatch.

2. Executive Order 12,866 and information quality

The Paperwork Reduction Act directs OIRA to manage the federal government's information resources. This is stated right at the outset in the Act's list of purposes, which include to:

- "ensure the greatest possible public benefit from and maximize the utility of information created, collected, maintained, used, shared and disseminated by or for the Federal Government" (44 U.S.C. § 3501(2))
- "coordinate, integrate, and to the extent practicable and appropriate, make uniform Federal information resources management policies and practices as a means to improve the productivity, efficiency, and effectiveness of Government programs, including the reduction of information collection burdens on the public and the improvement of service delivery to the public" (44 U.S. C. § 3501(3))
- "improve the quality and use of Federal information to strengthen decisionmaking, accountability, and openness in Government and society" (44 U.S.C. § 3501(4))
- "strengthen the partnership between the Federal Government and State, local, and tribal governments by minimizing the burden and maximizing the utility of information created, collected, maintained, used, disseminated, and retained by or for the Federal Government" (44 U.S.C. § 3501(6))
- "provide for the dissemination of public information on a timely basis, on equitable terms, and in a manner that promotes the utility of the information to the public and makes effective use of information technology (44 U.S.C. § 3501(7))

To accomplish these goals, OIRA (delegated by the OMB Director) is given a number of responsibilities, including:

[55] Structurally, it is little different from the one established by President Reagan in 1981. Only recently was OIRA's database of draft rules and information collection requests upgraded, and from the perspective of a regular user, this upgrade appears to have improved it so that it now approximates the state-of-the–art—for the year 2001.

- with respect to the collection of information by the government, to "maximize the practical utility of and public benefit from information collected by or for the Federal Government" (44 U.S.C. § 3504(c)(4))
- with respect to the dissemination of information by the government, to "develop and oversee the implementation of policies, principles, standards, and guidelines to (1) apply to Federal agency dissemination of public information, regardless of the form or format in which such information is disseminated; and (2) promote public access to public information and fulfill the purposes of this subchapter, including through the effective use of information technology" (44 U.S.C. § 3504(d))

OIRA is delegated statutory authority to accomplish these responsibilities through guidelines or rules (44 U.S.C. § 3516). The Information Quality Act directed OMB to use these authorities to:

> provide policy and procedural guidance to Federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies in fulfillment of the purposes and provisions of chapter 35 of title 44, United States Code, commonly referred to as the Paperwork Reduction Act.[56]

Congress said that OMB's guidance shall:

> (1) apply to the sharing by Federal agencies of, and access to, information disseminated by Federal agencies; and
>
> (2) require that each Federal agency to which the guidelines apply—
>
> > (A) issue guidelines ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by the agency, by not later than 1 year after the date of issuance of the guidelines under subsection (a);
> >
> > (B) establish administrative mechanisms allowing affected persons to seek and obtain correction of information maintained and disseminated by the agency that does not comply with the guidelines issued under subsection (a); and
> >
> > (C) report periodically to the Director—
> >
> > > (i) the number and nature of complaints received by the agency regarding the accuracy of information disseminated by the agency; and
> > >
> > > (ii) how such complaints were handled by the agency.

OIRA was given until October 1, 2002, to perform this task.

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[56] Pub. L. 106–554, § 1(a)(3) [title V, § 515], Dec. 21, 2000, 114 Stat. 2763, 2763A–153, codified at 44 U.S.C. 3516 note.

OIRA responded by issuing government-wide guidelines that every covered federal agency was required to emulate, taking account of its particular circumstances.[57] These guidelines defined crucial terms and directed each agency to establish administrative mechanisms enabling any affected person to seek and correct error and pre-dissemination review procedures to reduce its incidence. Almost every federal agency met the statutory deadline.[58]

As implemented by OIRA, this two-part scheme—an administrative mechanism sufficient to ensure that the public could both seek and obtain the correction of substandard information, and internal systems to minimize the dissemination of noncompliant information—has interesting incentive aspects. First, while agencies are supposed to avoid disseminating important information that does not comply with OIRA's objectivity, integrity, and utility tests, OIRA's guidelines created no mechanisms for monitoring or enforcement. Arguably, OIRA could have created such incentives by issuing a regulation instead of guidelines, but it did not do so.[59] Second, the ability to petition the government for redress was attenuated by assigning to the petitioner the burden of proof *and* delegating to the agency receiving the petition the authority to decide whether this burden had been met.

3. OIRA's lack of interest in the Information Quality Act

OIRA itself has not displayed any great interest in information quality, even though it is obviously important for benefit-cost analysis and it lies squarely within its statutory responsibilities under the Paperwork Reduction Act. OIRA issued OMB Circular A-4, its guidance to agencies on the conduct of Regulatory Impact Analysis, a year after it issued its government-wide information quality guidelines. But Circular A-4 has very little to say about information quality. The complete text of OMB's guidance to agencies on information quality consists of the following boilerplate sentence-paragraph:

> Finally, you should assure compliance with the Information Quality Guidelines for your agency and OMB's "Guidelines for Ensuring and

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[57] Office of Management and Budget (2002).

[58] There are some stark exceptions. For example, the Department of Homeland Security has not issued any information quality guidelines, nor have several of its major subordinate agencies: the Transportation Security Administration, U.S. Citizenship and Immigration Services (USCIS), U.S. Immigration and Customs Enforcement (ICE), and the Federal Emergency Management Agency (FEMA). See Belzer (2008). Peculiarly, DHS has published at least one annual report to OIRA regarding its response to petitions received in FY 2006. Unsurprising given its lack of guidelines and administrative procedures to manage petitions, it didn't receive any. See http://www.dhs.gov/xlibrary/assets/cio_infoqualityrpttemplatefy06.pdf.

[59] While the law directs OMB to "issue guidelines under sections 3504 (d)(1) and 3516" of the Paperwork Reduction Act, § 3516 expressly authorizes OMB to "promulgate rules, regulations, or procedures necessary…"

> Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies" ("data quality guidelines") http://www.whitehouse.gov/omb/fedreg/reproducible.html.

OIRA offers no suggestions on exactly *how* agencies should "ensure compliance." With respect its Paperwork Reduction Act reviews of information collection requests, OIRA has neither revised its Information Collection Rule nor published any useful guidance for any agency that might try to apply information quality principles to its information collection activities.

4. Empirical evidence on the IQA's performance

Given its inherently weak choice architecture, OMB's government-wide Information Quality Guidelines attracted disproportionate criticism. Opponents predicted that agencies would be paralyzed by mountains of complaints submitted by industry lobbyists intent on using the law as a stealth tool for undermining environmental, health and safety protections guaranteed by law and misused to delay, manipulate, and unfairly affect the outcome of federal agencies' activities.[60] In a law review article published in 2004, one prominent and vocal opponent made two rather startling assertions:

> There is little evidence that the scientific information that the agencies are currently using and disseminating is unreliable. Virtually all of the challenges that have been filed so far … have involved disputes over interpretations, inferences, models and similar policy issues, and not the "soundness" of the underlying data.[61]

When these sweeping conclusions were published, the petition process was barely two years old. The empirical record sufficient to make such sweeping claims could not have existed any more than the performance of the Freedom of Information Act

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[60] For a tour of the arguments made by several well-known opponents against the Information Quality Act, see the edited volume by Wagner and Steinzor (2006), especially the chapters by McGarity (2006) and Hornstein (2006). Opponents fear that the evidentiary rule of *Daubert* might be slowly incorporated into federal regulatory practice. McGarity advocates that the law be repealed because of its "suspicious origins, the lack of any demonstrated need for its requirements, and numerous examples of its misuse" (p. 43).

[61] McGarity (2004). McGarity's empirically bereft conclusions mimic his template used by the Center for Progressive Regulation (now *Reform*) to submit public comments to agencies opposing their proposed agency-specific information quality guidelines (McGarity 2002). This template presumes that the goals of the IQA are illegitimate irrespective of their statutory origin. The text opposes the IQA paradigm on the ground that limiting federal agencies to the dissemination of objective information could inhibit their mission performance. The template acknowledges the dissemination of information "can be an effective, low-cost way of supplementing traditional regulatory activities," with "several advantages over traditional regulation as means of promoting regulatory goals"—most notably, enabling agencies to escape the "ossification" of administrative law. Information dissemination is thus a desirable way to escape the burdensome requirements of the Administrative Procedure Act, and the IQA could close this loophole.

could have been properly evaluated in 1968. After the first two fiscal years, a total of 53 petitions had been filed to all federal agencies combined, an average of 27 per year. As Table 1below shows, the total number of petitions that has been filed since 2002 is modest (157) and steadily declining over time.[62]

What might be responsible for this limited and declining interest in IQA petitions? It could be, as alleged, that federal agencies rarely disseminate information that is inaccurate, unclear or biased. If that were true, however, then the many allegations that science has been corrupted by politics must be false, for the IQA enhances the public's capacity to challenge such behavior.[63] It also could be that potential petitioners have come to view the IQA process as a chimera because it does not explicitly provide for judicial review of agency actions (or inaction, for that matter). But of these explanations are difficult to test; the first requires examination of a comprehensive database, the second requires inside knowledge of the motivations of agency personnel and potential petitioners

Declining interest can be explained, however, by analyzing agencies' adherence to their procedural commitments. For example, if agencies "slow walk" petitions through their administrative processes, or they fail to provide meaningful responses when they do reply, or if the petitioner exercises the right of appeal mandated by the OMB guidelines but the agency does not follow bona fide independent appeal review procedures, then prospective petitioners may have come to believe that the process is valuable in theory but chimerical in practice, and therefore, not worth the expense.

Regulatory Checkbook has created a database of every IQA petition submitted to the federal government, which enables each of these procedural performance indicators to be tested. Unlike all previous empirical efforts, which have relied on either anecdote or sampling of undocumented representativeness, Inferences about what has actually occurred are thus not subject to sampling error because the database is a census. The first set of tests was completed and publicly presented in December 2008—an examination of the timeliness of agency response.[64] The hypothesis is simple: If agencies are not responding in a timely manner, then the administrative process is demonstrably not working as Congress intended. Irrespective of the technical merits of their petitions, the public cannot "seek *and obtain*" the correction of information that does not meet applicable quality standards. This enables more controversial issues, such as whether agency decisions ought to be judicially reviewable, to be put in abeyance.

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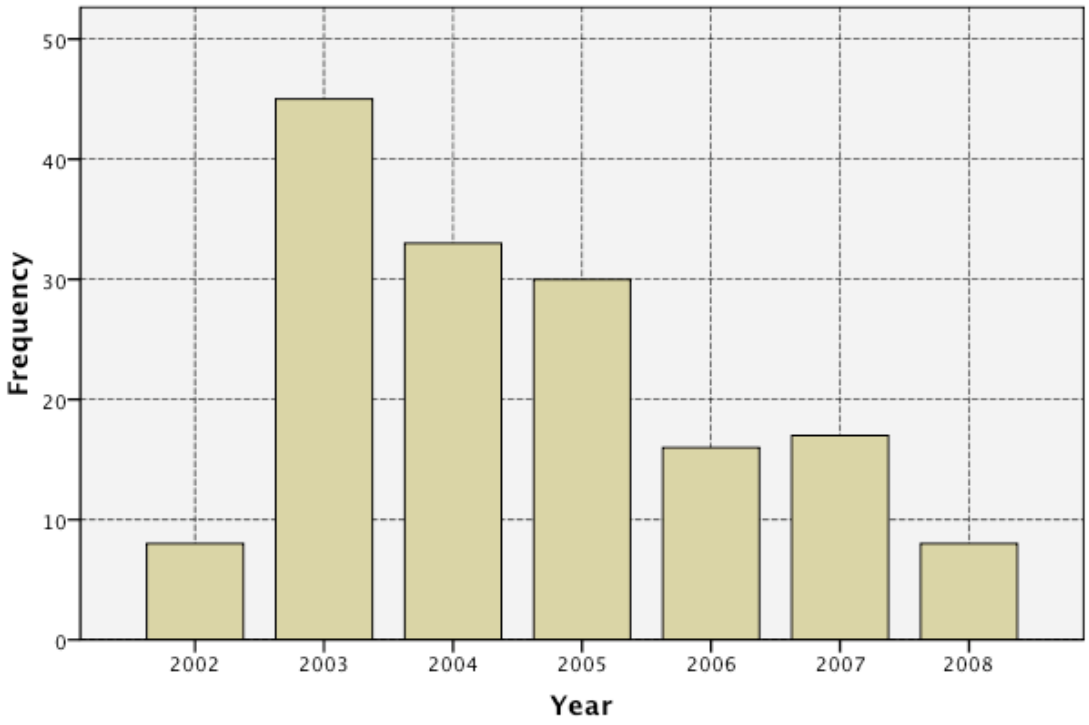
[62] Opponents of the IQA are in a similar position that opponents to the Freedom of Information Act were in 1968. Whereas FOIA opponents wanted to prevent the government from having to disclose information that is true, IQA opponents want to prevent the government from not disclosing information that is false.

[63] See, e.g., Rushing (2009) and Metzger (2009).

[64] Belzer (2008).

Figure 1: IQA Petitions by Year



Source: Belzer (2008)

OMB's government-wide guidelines required agencies to respond in a "timely" manner but allowed them the discretion to decide for themselves what constituted "timely." Most agencies chose 60 days, with EPA and a few other deciding that they would respond in 90 days. Among all federal agencies receiving at least two petitions, only the Department of the Treasury fulfilled its commitment for timely response. It committed to respond within 60 days; its average response time was 12 days. Table 1 below shows that the worst performers were not even close.

What explains agencies' tardiness? Contra McGarity (2004), who alleges that "virtually all" IQA challenges have been about policy rather than information, policy disputes are exempt from challenge under the IQA. Therefore, it is quick and easy for an agency to dismiss a petition that does not raise bona fide questions about information. Even if some petitioners have misused the petition process to attack agency policy decisions with which they disagree, this cannot explain why agencies have taken so long to respond. Indeed, the higher the percentage of cases in which petitioners abused the IQA petition process to challenge policy decisions, the *lower* should be the average agency response time.

Other possible explanations also can be ruled out. For example, agencies clearly are not overwhelmed by the volume of petitions they are receiving. Agencies

may prefer not to respond for bureaucratic reasons (e.g., it is not a high priority) or policy reasons (e.g., correcting error could undermine the agency's policy or regulatory position , or its stance with respect to litigation). What is clear, however, is that the IQA petition process needs a different agency choice architecture for it to be effective at detecting and policing technical error. As long as there is no incentive to respond promptly, many agencies will choose not to respond promptly.

Table 1: Information Quality Act Petitions, FY2002-08: Average Petition Review Times for Selected Agencies

Agency	Average Petition Review Time	Agency Definition of "Timely"	Average Agency Excess Review Time
Army Corps of Engineers	860	60	800
Dept of Energy	247	60	187
Dept of Commerce	240	60	180
Dept of Agriculture	239	60	179
Environmental Protection Agency	184	90	94
Dept of Health and Human Services	177	60	117
Dept of the Interior	126	60	66
Consumer Product Safety Commission	100	60	40

5. Improve the transparency and objectivity of benefit-cost analysis

Several commenters assert that the Bush administration systematically interfered with scientific information.[65] If this happened, then reinvigoration of the IQA is the surest way to overcome it. OMB's guidelines explicitly require that scientific and economic information be objective, both in presentation and substance. The objectivity standard provides a clear demarcation between science and policy. A new executive order could explicitly direct agencies to use objective data and methods, and the agencies could cite this language in defense against any and all attempts to interfere.

[65] See, e.g., Rushing (2009).

F. Can benefit-cost analysis accommodate equity and other noneconomic considerations?

A regulation is said to have "net benefits" if the sum of benefits is greater than the sum of benefits foregone. Our society is generally better off whenever net benefits are greater than zero and worse off when they are not, but there are exceptions. For example, significant distributional inequities with respect to who obtains the benefits of regulation and who bears the costs. Yet it is not enough to merely assert that significant distributional inequities might exist. The distributional incidence of benefits and costs must be carefully examined to discern, as reliably as the available data and methods permit, who gains and who loses as a result of regulatory action.

1. Equity

Executive Order 12,866 explicitly states that distributional effects are an important policy factor in regulatory decision-making.[66] However, it does not *require* agencies to perform the analysis necessary to know enough about distributional effects to actually inform decision-making. Because it lacks such a requirement, agencies rarely perform the analysis.[67] They may find it much easier to simply assert that distributional effects fall this way or that, but unsupported claims are just that: unsupported claims.

Revising Executive Order 12,866 to include a distributional analysis requirement is just the first step, however. It must be accompanied by default assumptions, incentives to improve performance, and other tools all aimed at ensuring that decision-makers have at their fingertips the objective information they need to actually take account of distributional effects in their regulatory decisions.

On the cost side, an appropriate default assumption might be that firms shift 100 percent of regulatory costs to stockholders, employees, customers, or vendors, with the allocation of these costs dependent on the respective elasticities in each market. They will be able to escape cost-bearing only to the extent that they are mobile or able to shift costs further downstream. Thus, on the capital side, owners of publicly traded companies are much less likely to actually bear costs than are owners of privately held firms. On the labor side, workers whose skills make them

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[66] See § 1(b)(5): "When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner' to achieve the regulatory objective. In doing so, each agency shall consider incentives for innovation, consistency, predictability, the costs of enforcement and compliance (to the government, regulated entities, and the public), flexibility, distributive impacts, and equity" (emphasis added).

[67] This does not mean that merely adding a distributional analysis requirement to Executive Order 12,866 would solve the problem. Rather, it means that the absence of such a requirement virtually guarantees that distributional analysis will not be performed.

mobile can escape cost-bearing by choosing to work elsewhere, but employees who lack marketable skills, or whose skills are unusually firm-specific, are likely to be left bearing regulatory costs. If a regulation raises the price of a certain type of product, consumers will bear its costs proportionate to their demand. If a regulation restricts the diversity of products allowed for sale (such as, for example, by requiring them to meet energy efficiency standards), then consumers whose preferred products are no longer available are the ones who will bear the costs.

Typically, even simple heuristics such as these drawn from elementary economics do not find their way into agency RIAs. When the Department of Energy has issued new energy efficiency standards for household appliances, for example, it has not accounted for their disproportionate impact on the poor. (Energy efficiency is a product attribute for which demand is income elastic.) On the other hand, the Environmental Protection Agency is well aware that primary drinking water standards are particularly expensive for small, rural communities and the poor. EPA take account of these equity considerations, though in a way that is incompatible with benefit-cost analysis.[68]

The key message is clear: The distributional effects of a proposed regulation *can* be objectively analyzed and the outputs of such analyses *can* be used to inform regulatory decision-making. However, distributional analyses is not, and cannot be, an alternative to objective benefit-cost analysis. Why? Because it is the distribution of benefits and costs that decision-makers want to know. Executive Order 12,866 expresses a vague desire that agencies take distributional effects into account, but it does not follow up that desire with any concrete requirements or incentives motivating performance. A new executive order can easily improve upon that.

2. Other special purpose analyses

When performed well, objective benefit-cost analysis provides the foundation for a host of secondary analyses to be performed. These secondary analyses may include comprehensive distributional analyses, or analyses of specific groups of concern such as State and local governments (Executive Order 13,132), impacts on small entities (Regulatory Flexibility Act), effects on children's health (Executive Order 13,045), or energy supply, distribution and use (Executive Order 13,211). With the notable exception of Regulatory Flexibility Analysis, which is required by law in many cases, agencies tend to ignore the presidential directives because they are not integrated into the generic benefit-cost framework. They could be.

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[68] EPA follows the model established by the Safe Drinking Water Act (42 U.S.C. 300g-1(b)(15)(A)), which emphasizes "affordability." This term has no meaning in benefit-cost analysis; it is strictly a matter of policy judgment whether one regulatory alternative is "affordable" and another is not.

G. Are proposed alternatives superior to benefit-cost analysis?

Benefit-cost analysis has its critics, and of course it is an imperfect tool for evaluating regulation. But it is a less imperfect tool than the frameworks that critics have suggested as alternatives. The tools they propose either discard important information, purposefully tinker with the analysis to achieve a predetermined result, or both.

1. The Precautionary Principle

Many critics of benefit-cost analysis prefer other tools such as the Precautionary Principle.[69] There are three problems with analysis based on the Precautionary Principle. First, the proposed methods ignore all dimensions other than those in which a prior commitment to decision-making precaution has been made. The Precautionary Principle, is at root, a form of highly risk-averse decision-making that may well be meritorious in specific cases. But the act of being presumptively risk-averse in one area implies a decision to be risk-loving in another. One can decide to devote extraordinary resources to avoid a very small risk of a catastrophic event, but one cannot simultaneously decide to be risk-averse with respect to the resources thereby expended.[70]

The second problem with analysis based on the Precautionary Principle is it's hard, and perhaps impossible by design, to discern where the analytical component ends and the policy component begins. Benefit-cost analysis is susceptible to misuse and abuse, but there are relatively clear principles for deciding how to perform it. A benefit-cost analysis, transparently disclosed, can be independently critiqued. That is not true for analysis based on the Precautionary Principle. The values of the analysts themselves are crucial to the product. Any attempted critique becomes a direct challenge to these values.

The third problem with analysis based on the Precautionary Principle is one that applies also to cost-effectiveness analysis: It throws away valuable information. There may be times when a benefit-cost analysis provides too much detail, such as for example providing information on margins completely irrelevant to decision-making. There also may be times when a benefit-cost analysis gives too much precision to be meaningful to decision-makers, who could be incapable of discerning such small magnitudes. In both cases, it is the decision-maker who should have the authority to discard information based on the needs of the moment. Analysts should

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[69] See, e.g., Myers and Raffensperger (2006) for an example promoting the Precautionary Principle as both a decision-making rule and an analytic tool.

[70] Wiener and Stern (2006) have noted that the decision to overthrow Saddam Hussein is an example of the Precautionary Principle applied to the risk of nuclear, chemical, or biological weapons being used openly or discreetly to attack the United States or its allies. This decision clearly was precautionary with respect to that risk, but it could (and was not) precautionary with respect to the military resources required to take this precautionary act.

strive to provide information at a quality level appropriate for decision-making, but they should not exercise their own judgment to decide what information decision-makers should see.[71]

2. Cost-effectiveness analysis

This analytic tool, which is properly understood as a subset of benefit-cost analysis, seeks to identify the alternative that achieves a specific objective at least cost.[72] Traditionally, this has been the tool of choice in health care economics where there are well-defined objectives that medical science is trying to achieve. For example, if the medical objective is to minimize the likelihood of suffering a fatal heart attack resulting from coronary heart disease, it is entirely reasonable to use cost-effectiveness analysis to compare angioplasty with coronary artery bypass grafting.

Cost-effectiveness analysis breaks down in two common situations. Continuing with the heart attack example, there may be other outcomes besides fatal heart attack that matter to patients. One medical intervention could make *fatal* heart attacks less likely but the risk of *nonfatal* heart attacks greater. Heart patients may reasonably care about both, but cost-effectiveness analysis cannot manage more than one objective.

Another common situation in which cost-effectiveness analysis breaks down is when the objective function is arbitrarily-defined. What if angioplasty is more cost-effective at preventing fatal heart attacks for up to, say, five years, but coronary artery bypass grafting is more cost-effective for years beyond the fifth? Similar problems arise in important regulatory policy areas., and cost-effectiveness analysis may not be as useful as its proponents want it to be.[73]

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[71] The more common phenomenon is insufficient information combined with excess precision and no acknowledgement of uncertainty. This should be understood as a violation of the information quality standards of objectivity and utility.

[72] The most forceful advocate of cost-effectiveness analysis may be former OIRA Administrator John Graham. Much of the difference between OMB Circular A-4 and the previous versions of OMB guidance on Regulatory Impact Analysis (Office of Management and Budget 1990b, 1996, 2000) reflect additions made to accommodate cost-effectiveness analysis.

[73] Ackerman (2009) prefers cost-effectiveness analysis because he opposes monetization of benefits such as reductions in health risk:

> For urgent, high-risk problems such as climate change, regulatory standards are often expressed as absolute physical limits, such as a 450 ppm cap on carbon dioxide concentrations in the atmosphere. Regulatory review should then involve *cost-effectiveness analysis* of the least-cost strategy for compliance with the standard. Cost-effectiveness analysis avoids many of the problems of cost-benefit analysis. Monetization of benefits, the weakest link in the cost-benefit approach, is unnecessary once an absolute standard has been adopted (emphasis in original).

Many find appealing the chief defect of cost-effectiveness analysis—the fact that it ignores benefits, and thus enables them avoid the controversies that surround monetization. Ignoring benefit valuation does not make benefit valuation go away, however. Patients do place different values on avoiding small risks of both fatal and nonfatal heart attacks. These differences can be denominated in dollars based on relative willingness-to-pay, or they can be denominated in more abstract units. Ultimately, the choice of unit is less important than the fact that benefit-cost analysis creates a choice architecture in which the decision-maker—whether that's a heart patient or a Cabinet secretary—must take all effects into account and not look for a shortcut.[74]

3. Multiattribute decision analysis

In the decision theory world, benefit-cost analysis is a special case of something called *multiattribute decision analysis*, or MDA. This tool has been around for decades, and used effectively or making policy decisions.[75] Benefit-cost analysis uses monetized estimates of benefits and costs to ascertain which alternative offers the greatest net social benefit. By contrast, MDA allows decision-makers to assign their own weights to the various outcomes. This is particularly useful in any case where there are significant tradeoffs between efficiency and equity. In addition to allowing decision-makers to specify their own weights, MDA makes these weights transparent.

Rather than an alternative to benefit-cost analysis, MDA is best understood as a complementary tool. Both require careful, objective assessments of inputs, outputs, and outcomes. A new executive order could specifically mention decision analysis as one of the endorsed techniques, and this might encourage more agencies to use it.

Cost-effectiveness analysis would deny the President and his senior advisors benefit and cost estimates for alternative carbon dioxide targets such as 400 and 500 ppm. The incremental benefits and costs of a higher (or lower) target would be ignored. Forcing analysts to consider just a single target also may imply a level of uncertainty that is inconsistent with the best available objective scientific information.

This seems to be Ackerman's purpose, however: "Cost-benefit analysis of climate policy can easily amount to second-guessing or challenging the emerging policy consensus." In short, benefit-cost analysis might lead decision-makers, including President Obama, to make a different policy decision.

[74] Posner (2009) recommends that OIRA establish a database of valuation estimates and that the new executive order require agencies to use them. Such a plan could well exceed the information quality foundations of the scholarly literature. A more workable alternative might be to build the database from the peer-reviewed scholarly literature, revising it annually or so, and use the database to establish defaults that could be readily supplanted by persuasive scholarly evidence. Strong defaults are no more desirable in the valuation of nonmarket benefits than they are for estimating risk.

[75] See, e.g., Keeney and Raiffa (1976).

4. "Pragmatic regulatory impact analysis"

A few law professors have commented on this notice advocating that benefit-cost analysis be replaced with something they call "pragmatic regulatory impact analysis."[76] Their proposal is examined below, but first it must be noted that it is founded on several elementary conceptual errors. The most prominent of these errors is their dismissal of willingness-to-pay as the approximation of consumer's surplus because it is typically an increasing function of income. "Wealthy people are able to pay more to attain a certain benefit or to avoid a certain risk," they say. This is of course true because risk reduction is a normal good; the quantity demanded rises with income. But it fails to explain why it is okay for people to use their wealth to pay more than the poor to reduce some risks but not others. The only logic that seems to apply is if Congress has stepped in to regulate, then everyone must "purchase" the same level of risk (or risk reduction) regardless of how much they want.

This logic is discriminatory against the poor. When Congress does step in, it is usually the preferences of the wealthy that guide its direct or delegated decisions. Socializing decisions about the maximum level of acceptable risk tends to lead to risk levels closely approximating what the wealthy desire, and it forces the poor to reallocate their budgets to accommodate the values of the rich.

Critics also object to several other technical aspects of benefit-cost analysis, most notably the practice of discounting future benefit and costs based on individuals' known preferences for delaying cost-bearing and expediting benefit-receiving. This debate is old and sterile; if in fact individuals preferred to bear costs early and receive benefit later, then benefit-cost analysis would use negative discount rates. But it just isn't so. The essence of the critics' complaint is that benefit-cost analysis uses positive interest rates to mimic how individuals actually behave. By rejecting discounting they imply that they know better what preferences other people ought to have and this superior moral knowledge entitles them to make decisions for them. These critics believe only in the second half of libertarian paternalism.[77]

The critics are surely entitled to believe in paternalism, or for that matter in the notion that all risk management decisions ought to be socially determined. These beliefs do not, however, provide a useful framework for regulatory impact *analysis*. This is clear from their own statement of how their alternative method would work:

> First, agencies determine whether a "risk trigger" has been met. The trigger specifies when risk is sufficiently serious to warrant regulation under the applicable statute. Although agencies must demonstrate that the risk to the

[76] Steinzor (2009).

[77] Thaler and Sunstein (2003).

> public or the environment exceeds some threshold, regulators are authorized to act on the basis of anticipated harm. Second, agencies must determine the level of regulation by using whatever standard the statute applies to those determinations.[78]

This "method" is all about decision-making; it has no analytic component. If agencies are to use a "risk trigger," how should risk be estimated? What constitutes a sufficient "demonstration" that risk exceeds the trigger? How are variability in the affected population and scientific uncertainty estimated? How is "anticipated" harm defined? None of these analytic questions is addressed, making it utterly useless as an analytic framework.[79]

5. "Holistic analysis"

Some opponents of benefit-cost analysis propose what they call "holistic analysis" instead:[80]

> Costs as a whole, usually expressed in dollars, can be compared to benefits as a whole, expressed in their natural, usually non-monetary units. The essential comparison is still present, but it is freed from the insoluble problem of monetization of priceless benefits. Since the comparison is no longer strictly numerical, there is an inescapably deliberative element to the process – as there is in most public policy. [81]

The idea is to circumvent the problem of valuing nonmarket benefits, such as health risk reduction and environmental protection. But they accomplishes this by failing to count costs correctly—that is, in opportunity cost terms, meaning the value of benefits foregone. Thus, leaving aside the problem that it makes tradeoffs opaque and confusing, and invites decision-makers to keep them so, "holistic analysis" is inherently biased with respect to (at least) the cost side of the ledger.

6. "Risk-only analysis"

Some critics of benefit-cost analysis recommend an alternative analytic framework that, at its root, simply ignores cost. By doing so, the only thing that matters is benefits—or rather, *potential* benefits. This position is held irrespective of benefits foregone, because in this model benefits foregone are irrelevant to decision-making.

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[78] Steinzor (2009, p. 6).

[79] A number of crucial policy issues also are left ambiguous. If Congress has not opined clearly, who chooses the risk triggers? What proportion of the affected population must be protected? Under what circumstances? What if the risk is voluntary?

[80] See, e.g., Ackerman and Heinzerling (2004) and Ackerman (2009).

[81] Ackerman (2009).

Proponents of "risk-only analysis" are easy to find. In a public comment to OMB on the new executive order, one critic of benefit-cost analysis claims that *under-regulation* is now an obvious problem:

> Would the producers of peanut butter be better or worse off today if they had been subject to stricter health and sanitary regulation of their facilities? Just a few cases of salmonella poisoning were enough to cause a massive slump in sales.[82]

The question is supposed to answer itself, but it raises more questions than it answers. The thousands of recent product recalls are associated with an outbreak of *Salmonella* typhimurium caused by a single company that knowingly and wantonly violated countless existing regulations. How would more regulation solve this problem? Furthermore, contrary to the announced premise, the costs of more regulation would be borne by firms that already comply with existing regulations, and whose facilities do not have contaminated product. How would more regulation make honest business managers better off?

To proponents of risk-only analysis, all that matters is that a potential risk has been identified. There is no end to the regulatory burden that would result from this framework, because risk cannot be eliminated; it only can be managed. More to the point, it does not provide a useful framework for *analyzing* anything, and thus it cannot be an alternative to benefit-cost analysis.[83] For an agency trying to decide which of several possible risks it might try to reduce, risk-only analysis provides clear but useless advice: eliminate all of them.

H. Recommendations

Benefit-cost analysis remains the only standardized, transparent, independently peer reviewable, and conceptually objective framework for presidential regulatory review. The alternatives that have been proposed conflate regulatory analysis with regulatory decision-making (e.g., the Precautionary Principle), discard potentially valuable information (e.g., the Precautionary Principle and cost-effectiveness analysis), or lack any analytical foundation (e.g., "pragmatic regulatory impact analysis" and "risk-only analysis").

If Executive Order 12,866 is replaced, its successor should retain—and indeed, strengthen—a fundamental commitment to benefit-cost analysis. Moreover,

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[82] Ackerman (2009).

[83] The risk-only analysis model also invites shoot-from-the hip problem diagnosis. Ackerman (2009) attributes the August 1, 2007, collapse of the I-35W bridge over the Mississippi River near Minneapolis to our "allowing infrastructure to crumble," though how this translates to under-regulation is not clear. Moreover, this bridge was in the midst of a reconstruction project. The proximate cause of the collapse were procedures used by the contractor, some of which the contractor says were prescribed by the State of Minnesota. See National Transportation Safety Board (2008).

the executive order should establish, for the first time, a firm requirement that agencies meet minimum quality standards.[84] Too much of the alleged controversy arises due to an apparent lack of technical knowledge. This s=is confounded by a peculiarly anti-intellectual distrust of things quantitative,[85] as if deciding *not* to measure or estimate important things would somehow make decision-making more transparent and consistent with public values.

IV. Role of Behavioral Sciences

Contrary to a widely disseminated image of OIRA career analysts, they are not automatons beholden to simplistic models of individual and firm behavior. They fully appreciate the ways in which both firms and individuals behave in ways that violate the strict mathematical assumptions of Von Neumann-Morgenstern utility theory.

At the same time, OIRA career analysts also have a richer perspective of governmental behavior than that which is propagated in elementary civics books. For example, it is generally accepted that agencies have their own missions and agendas, and that these missions and agendas often extend beyond the technical scope and scale of their statutory authorities. Significant variations in mission and agenda arise within agencies, too. Perforce their experience in regulatory review and oversight, OIRA career analysts take these factors into account throughout the full array of functions they conduct on behalf of the President.

A. Can regulatory design account for adaptive responses?

A lot of exciting work has been done recently to incorporate the lessons of behavioral science research into decision-making, including decision-making by government agencies. Empirical evidence of adaptive behavioral responses to regulation is well known,[86] and OIRA has long considered these lessons in presidential regulatory review. For OIRA career analysts, taking account of behavioral sciences will be easy.

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[84] OIRA's 1996 guidance on Regulatory Impact Analysis (Office of Management and Budget 1996) is often described as a "best practices" document. In fact, almost all of its contents consist of *minimum* practices necessary to yield a credible work product—e.g., using the correct regulatory baseline, identifying and analyzing a diverse and useful array of alternatives, characterizing costs as costs, benefits as benefits, avoiding double-counting, discounting both benefits and costs, etc. Similarly, most of OMB Circular A-4 deals with essential aspects of benefit-cost analysis, not state-of-the-art economic science.

[85] Steinzor (2009, p. 5), for example, displays the effects of numerophobia. Benefit-cost analysis is bad because it produces a "a veil of numbers, and renders the decision-making process inaccessible to all those who lack advanced training in economics."

[86] The first empirical examination in the economics literature of behavioral effects from regulation may be the study of drivers' adaptive responses to seat belts by Sam Peltzman (1975).

The same may not be true of regulatory agencies. To use an obvious example, agencies tend to estimate benefits and costs based on the assumptions that there will be 100 percent compliance and costless enforcement.[87] It is understandable that agencies would not want to publicly acknowledge their true compliance expectations, for revealing a low rate could be misunderstood as an endorsement of noncompliance or, alternatively, exacerbate the noncompliance problem. There may be other reasons, however.[88] Note, however, that the Internal Revenue Service regulatory reports estimates of tax noncompliance but few would infer that the IRS endorses the practice.

B. Can behavioral science lessons be applied to the presidential regulatory review process?

Although Executive Order 12,866 does not mention behavioral science anywhere in its text, its lessons are widely distributed throughout the presidential review process that OIRA administers. It is routine within OIRA to give a high degree of deference to behavioral science. Greater acknowledgement of this fact in the revised executive order would provide OIRA career analysts a more solid foundation for considering such factors. Nonetheless, the President should be careful not to enshrine the behavioral science literature in such a way that it implies that all the important lessons have already been learned. Science proceeds by challenging prevailing knowledge, not by asserting the existence of various consensus opinions that must be accepted and never contested. [89]

1. Lessons for regulation

The same kinds of lessons that behavior science research teaches about regulatory choice architecture can be applied to the design of presidential regulatory review. For example, Executive Order 12,866 appears to establish a net social benefit criterion as the most important regulatory policy objective of all, but other interpretations of the text are surely reasonable because of its complex structure.[90] The Order contains about a dozen different principles that appear to be

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[87] There are instances in which an agency has assumed that regulated entities already comply with a regulation (and hence it has effectively zero costs) but that zero percent of the benefits are obtained without the regulation.

[88] For example, it is widely believed that both assumptions are favored by agency lawyers.

[89] This applies also to the theory and practice of benefit-cost analysis. This comment recommends respecting accepted theory in the field unless and until it has been successfully challenged by contrary empirical evidence.

[90] Section 1(a) -- the "Statement of Regulatory Philosophy and Principles" – includes the following text at the end of a long paragraph:

> Further, in choosing among alternative regulatory approaches, agencies should select those approaches that maximize net benefits (including potential economic,

somewhat subordinate (see § 1(b)). These regulatory principles sometimes conflict, but the mathematical fact that multiple objectives cannot be simultaneously maximized is not acknowledged, even implicitly. Whether one agrees or disagrees as a matter of public policy, Executive Order 12,291 had the benefit of much greater clarity of purpose. With concerted effort, virtually any regulatory action can be defended by reliance on text somewhere or other in Executive Order 12,866.[91]

This confusion has been the source of considerable uncertainty in presidential regulatory review, both to the agencies and to the OIRA career staff. Generally, the career staff is able and willing to apply whatever set of well-defined principles the President chooses to establish. After all, the President is their one and only client. Confusion about what the President actually wants makes it harder than necessary for them (and the agencies) to perform their assignments efficiently and effectively. Regulatory review would be greatly enhanced if the President made transparent the kinds of situations in which he would prefer that a specific regulatory principle receive greater weight. [92]

One way to do this would be to rank, not list, the principles that are expected to be follow. Ranking can get complicated, of course. A useful way to approach the ranking task would be to identify a default principle (e.g., social net benefit maximization) that applies in the absence of other specified conditions. Where each such condition arises, a set of secondary principles would be triggered. These secondary principles could be ranked rather than listed. Figure 2 illustrates how regulatory principles could be organized this way to improve transparency and efficiency in the regulatory development and review processes.

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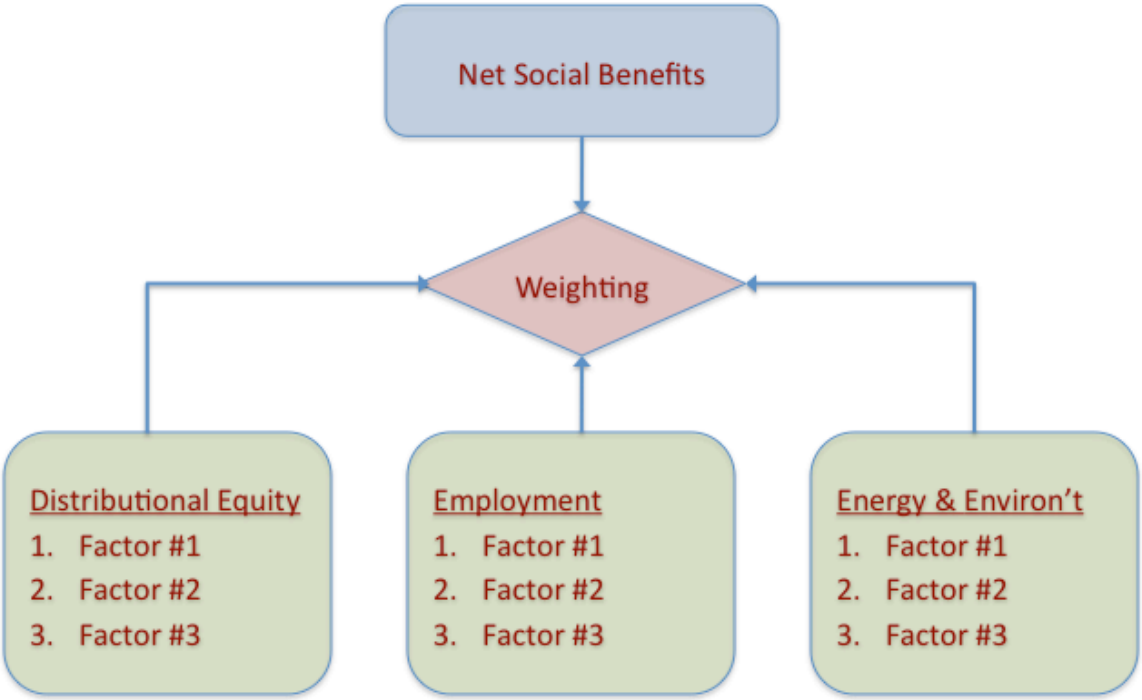
environmental, public health and safety, and other advantages; distributive impacts; and equity). unless a statute requires another regulatory approach.

[91] The most prominent example is the Order's prescription in § 1(b)(6) that, having fully assessed benefits and costs, agencies shall "propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs" (emphasis added).

[92] For many opponents of presidential regulatory review, opposition appears to result from policy disagreements with President Bush. See, e.g., Metzger (2009, p. 1), and the numerous references cited therein. Presidential regulatory review is a process by which any president implements his regulatory agenda. The merits of that process must be evaluated without regard to one's opinions of the president's policy views.

Figure 2: Illustrative Ranking of Regulatory Principles



A key feature of this structure is that helps maintains a clear distinction between the analytic and decision-making components, and reinforces the crucial step that government officials—not analysts, whether in OIRA or the agencies—are the only ones authorized to decide how to weight the competing regulatory policy goals. To make this process as simple as possible, the new executive order should include a form of mandatory RECAP reporting so that all agencies—and the regulatory alternatives each considers—is provided in a fashion that improves decision-making capacity.[93]

2. Lessons for the regulatory review process

The behavioral science literature mostly deals with the conduct of individuals, but it is only a matter of time before it is applied to organizations such as firms and regulatory agencies. These extensions likely will use as their starting point the theories of regulation first exposited by George Stigler and James Buchanan, both Nobel Prize winners in economics.[94] A vast literature has developed that seeks to use economic models to explain political and agency actions. It is, in

[93] Applied here, RECAP stands for Record, Evaluate, and Compare Alternative (Social) Prices of regulatory alternatives. See Thaler and Sunstein (2008, pp. 93-94).

[94] See, e.g., Stigler (1971) and Buchanan and Tullock (Buchanan and Tullock 1962).

principle, a small step to integrate this literature with that of behavioral and experimental economics.

As a first approximation, it is clear that Executive Order 12,866 has established very good incentives and fostered good practices in some areas, but it has been less successful in others. Most notably, the Order has resulted in serious opacity concerning the intersection between regulatory analysis and regulatory decision-making. Even OIRA career analysts have difficulty discerning where science and economics end and policy begins. It should not be surprising that the public—and especially the businesses, trade associations, and nongovernment organizations that populate Washington—do not know either. Consequently, there is a shallow reservoir of confidence that the process operates fairly.

Within the realm of analysis, Executive Order 12,866 has unwittingly incentivized certain kinds of gamesmanship, both within OIRA and among the agencies, which help preserve each side's positions. This is discussed in more detail in Section V below. From the perspective of the OIRA career analyst—with which I am personally familiar— Executive Order 12,866 provides very few tools that can be used to nudge agency analysts to make better analytic choices. As it now stands, OIRA career staff can secure whatever improvements they can persuade agency program managers and attorneys to allow agency analysts to make. Only the OIRA Administrator can return a draft rule for agency reconsideration. Such decisions are public, controversial, and metaphorically nuclear, so they are made very rarely. Presidential regulatory review will be handicapped as long as the number of draft rules returned continues to be a small fraction than the number that justify such action if minimum standards for analytic quality or adherence to he regulatory principles of the executive order are taken seriously.

V. Relationship Between OIRA and the Agencies

Agencies and OIRA develop working relationships based on both the transaction-by-transaction nature of the presidential regulatory review process and the fact that this process is a repeated transaction game. [95] New OIRA career analysts are introduced to the process through a form of on-the-job survival training. No academic or outside work experience provides adequate preparation. Over the course of a year or so, new OIRA analysts learn through repeated transactions with their agency counterparts when to be demanding and when to be deferential. The same is true, of course, for their agency counterparts. Proposals that remove OIRA from its transactional activities, however well-meaning, would assure failure.[96]

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[95] The term "game" is used in the context of game theory, not to trivialize the activity.

[96] See, e.g., Rushing (2009).

Section II.A above included an extensive discussion of recent work by O'Connell (2009) showing that the OIRA side of the regulatory development process was both stable and limited in duration. There was no evidence that presidential regulatory review caused undue delay. However, O'Connell also documented that the process to transform a notice of proposed rulemaking into a final rule took almost two years. At each end of this process lies an OIRA career staff review. OIRA's ability to perform both tasks efficiently is attenuated t by staff turnover, but mostly because the relevant OIRA analyst may have dozens of such regulatory packages to monitor at any time, not just the one that has occupied particular agency personnel for years. Oftentimes these packages come from different parts of an agency—offices that may not even talk to each other!—or even across agencies. It takes time to recover dated knowledge about a notice of proposed rulemaking at the time a draft final rule is ripe for review, but the review process operates on strict deadlines that do not take this into account.

Despite these problems, there is no substitute for transaction-by-transaction regulatory review. It is essential to build good working relationships between the OIRA career staff and their agency counterparts, and also to establish the beneficial incentives characteristic of repeated transaction markets.[97] Proposals to supplant transaction-by-transaction review, turning OIRA career analysts into salesmen for the agencies in the budget process, reflects no understanding of either the actual work of regulatory review or of the utility it offers the President.[98]

Some proposals are so other-worldly that it is reasonable to infer that their advocates do not want to improve presidential regulatory review process so much as to destroy it. No one would seriously propose that peer review panels be assembled to decide how much money a team of scientists needs to undertake all the research it would like to conduct. Peer review is a quality control step, conducted at various stages of the research process to assure that scientific research passes minimum scholarly standards. OIRA career analysts are supposed to serve an analogous function with respect to benefit-cost analysis and the President's regulatory policy agenda.

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[97] Markets in which buyers and sellers engage rarely are the most susceptible to asymmetrical information and other defects that lead to market failure. Classic examples include residential real estate, school or college selection, marriage, funeral services, and of course, aluminum siding.

[98] See, e.g., Rushing (2009), Ackerman (2009), and especially Steinzor (2009, p. 4): "Rather than view the primary job of a 'regulatory czar' as prohibiting excessive regulation, we would define it as revamping the regulatory system to ensure that agencies are able to fulfill their regulatory missions in a vigorous, timely, effective, and wise manner. Instead of fine-tuning cost-benefit analysis, we recommend that the OIRA undertake an analysis of how much it would cost to increase agency budgets to the point that their statutory missions could be fulfilled." Steinzor does not say what would be the next step if OIRA analysts were to objectively conclude that an agency's mission cannot be achieved at any cost.

A. Are there credible alternatives to OIRA?

OIRA has a unique role within OMB, and within the Executive Office of the President in general: helping the President to coordinate across the government myriad policies, programs, and proposals that are not within the conventional budget review that OMB's Resource Management Offices perform or OMB's other statutory offices.[99]

1. The intersection between paperwork and regulatory review

OIRA provides the career staff necessary to help ensure that the Executive branch acts consistently with the President's directives with respect to regulatory and paperwork matters. Because of the breadth of activities underway at any time, it is inevitable that some agency initiatives need to be reviewed for consistency with the President's program.

Paperwork reduction provides a helpful illustration. OIRA was created by the Paperwork Reduction Act of 1980 (44 U.S.C. Part 35), one purpose of which is to

> coordinate, integrate, and to the extent practicable and appropriate, make uniform Federal information resources management policies and practices as a means to improve the productivity, efficiency, and effectiveness of Government programs, including the reduction of information collection burdens on the public and the improvement of service delivery to the public.[100]

A common problem with respect to government information collection is the tendency of agencies to seek from the public (and sometimes, mandate that the public provide) the same information that other agencies already have obtained. To stop this practice, Congress directed OIRA to:

> (3) minimize the Federal information collection burden, with particular emphasis on those individuals and entities most adversely affected;
>
> (4) maximize the practical utility of and public benefit from information collected by or for the Federal Government; and
>
> (5) establish and oversee standards and guidelines by which agencies are to estimate the burden to comply with a proposed collection of information.[101]

Analogous overlaps arise with respect to regulation, so it was a natural fit to entrust presidential review of regulation to OIRA. If regulatory review were assigned to

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[99] Other statutory offices within OMB include the Office of Federal Procurement Policy, the Office of Federal Financial Management, and the Office of E-Government & Information Technology. The latter office used to be within OIRA.

[100] 44 U.S.C. § 3501(3).

[101] 44 U.S.C. § 3504(c)(3)-(5).

another office, a new layer of bureaucracy would have to be invented so that paperwork reviewers could coordinate with regulatory reviewers, and to resolve any disagreements that arise.

2. Interagency coordination

An often neglected but essential role that OIRA performs during regulatory review is to identify, and help resolve, disagreements across agencies. Agencies work hard to fulfill their statutory missions, but they tend to place relatively little weight on the missions of sister agencies. The Executive Office of the President needs the capacity to resolve these matters, and because the nature, scope or other dimension of the issue can be exceedingly technical, busy EOP staff need the assistance of career personnel who are knowledgeable about the details and are capable of serving as honest brokers.

To encourage agencies to take account of competing agency concerns, Executive Order 12,866 explicitly includes within the definition of a "significant regulatory action" any regulation that may "[c]reate a serious inconsistency or otherwise interfere with an action taken or planned by another agency" (§ 3(f)(2)). It also directs OIRA to be on the lookout for such conflicts and notify affected agencies when they are discovered (§ 4(c)(5)).[102] This language ensures that whenever a draft regulation authored by one agency significantly impacts another, the OIRA Administrator has the authority to ensure that it is subjected to presidential review and that a process is set up to achieve resolution.

It is essential that these provisions in Executive Order 12,866 be retained, for without them the President's ability to organize and manage the Executive branch is seriously handicapped. Moreover, OIRA's capacity to effectively perform presidential review should be enhanced in these cases. For example, it is a conventional feature of presidential regulatory review to limit the time that OIRA can take to complete its work; Executive Order 12866 generally prescribes 90 days,[103] and the average review time has been less than 60 days.[104]

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[102] "If the Administrator of OIRA believes that a planned regulatory action of an agency may be inconsistent with the President's priorities or the principles set forth in this Executive order or may be in conflict with any policy or action taken or planned by another agency, the Administrator of OIRA shall promptly notify, in writing, the affected agencies, the Advisors, and the Vice President" (emphasis added).

[103] § 6(b)(2(B).

[104] For the period January 20, 2001, through January 19, 2009, the average review time was 55 days for the 5,125 draft rules reviewed, and 43 days for the 755 economically significant draft rules reviewed. For the period January 20, 1993, through January 19, 2001, the average review time was 44 days for the 6,219 draft rules reviewed, and 45 days for the 732 economically significant draft rules reviewed. See www.reginfo.gov.

When OIRA encounters an undisclosed or unresolved interagency disagreement, competent presidential regulatory review is inherently more complicated—and time-consuming. But the fixed deadline for completion of review does not take this into account. Regulatory Policy Officers of affected agencies may not be aware of the issues until they are consulted by OIRA career staff.[105] Nothing in Executive Order 12,866 requires the agency authoring a draft rule to identify potential conflicts or consult with sister agencies to resolve them prior to submission to OIRA.[106] Indeed, every agency has an incentive to keep quiet about potential conflicts with other agencies and shift to OIRA the burden of discovering and resolving them, all without the benefit of any additional time.

A new executive order should modify formal regulatory review procedures to explicitly authorize OIRA more time to complete its review when bona fide interagency disagreements arise. It also should allow the OIRA Administrator to stop or restart the clock to give affected agencies time to participate effectively in the review.. Whether this occurs automatically hen certain conditions arose, or it required an affirmative act of the Administrator is an important matter of choice architecture.[107]

3. The problem of regulation masquerading as guidance

Not every important regulatory activity is caught by the definitions in Executive Order 12,866. Coverage is limited to *regulatory actions*, a term of art defined as

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[105] Regulatory Policy Officers (RPOs) were established by § 6(a)(2) of Executive Order 12,866. Some commentators have incorrectly attributed the creation of the RPOs to Executive Order 13,497.

[106] § 1(b)(10) establishes the regulatory principle that "agenc[ies] shall avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations or those of other Federal agencies." However, this language requires, at a minimum, the prior existence of an existing regulation elsewhere. It does not address the situation in which the draft regulation conflicts with another agency's mission or statutory authority or it conflicts with a potential future regulation. Thus, Executive Order 12,866 unwittingly creates a "first-mover" advantage that is unrelated to whether the agency is best equipped to generate net social benefits.

[107] Choosing appropriate defaults is one of several critical elements in the design of decision choice architecture (Thaler and Sunstein 2008, pp. 83-87). Many agencies "will take whatever option requires the least effort, or the path of least resistance." Choosing a default is inevitable; it cannot be avoided. Sometimes choice architecture can rely on "mandated choice" in which a decision-maker must select one option or another. For the OIRA Administrator, who faces dozens of decisions to make each day and whose time is the scarcest resource in presidential regulatory review, the prospect of having a "mandated choice" probably would be ineffective. If the clock were restarted automatically upon the discovery of an undisclosed or unresolved interagency coordination issue, the Administrator would simultaneously maximize agencies' incentives to avoid submitting draft regulations prematurely and minimize the time he spends managing minor procedural issues.

> any substantive action by an agency (normally published in the Federal Register) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking (§ 3(e)).

This definition misses vast tracts of significant regulatory activity. Agencies have strong incentives to circumvent the Administrative Procedure Act by characterizing rulemaking actions as guidance, even when regulated parties have little or no discretion to deviate.

OMB's recent Bulletin on Good Guidance Practices provides an excellent explication of the problem and sound recommendations for solving it.[108] Whether the problem is EPA or FDA hazard assessment documents that effectively prescribe risk management requirements, USDA and DOI field manuals that government personnel use to make suggested approaches mandatory, or the Patent Office's Manual on Patent Examination Procedures which patent examiners choose to ignore when it is convenient, guidance that has significant regulatory content ought to be subject to the presidential review process. The mere act of including these actions within the scope of a new executive order will motivate agencies to take greater care that they use guidance properly, and not as an indirect way to regulate outside of the Administrative Procedure Act and the president's own oversight.

4. Other structures for presidential regulatory oversight

Periodically there are calls for fundamentally changing the structure of the process based on the desire to rid interagency relationships of conflict. One such approach is negotiated rulemaking (Harter 2009). The history of negotiated rulemaking cannot be summarized here, but it is safe to say that thus far it has failed to live up to its potential. Despite the fact that its review occurs at the end of the process, and moreover, its capacity to influence the outcome of a regulation is virtually nil once a negotiated settlement has been reached among the participating stakeholders, the failure of negotiated rulemaking has been blamed on OIRA:

> As explained in my earlier note, OIRA actively discouraged the use of negotiated rulemaking and made it difficult for agencies to implement the directive. That opposition was in large part driven by a self interest on the part of OIRA staff to preserve a maximum amount of discretion on its part. The belief was, I have been authoritatively told, that OIRA felt that it was more difficult to force the agency to change a rule that was developed by a consensual process. That is, of course, antithetical to transparency, public participation, and collaboration. Moreover, OIRA made no effort to ensure that agencies engaged in an effective public participation or collaborative process in developing a proposal. As a result, agencies became sloppy in the use of collaboration and took shortcuts that both diminished the breadth of

[108] Office of Management and Budget (2007).

> participation and its effectiveness in crafting creative solutions to complex regulatory issues.[109]

Apart from its obvious reliance on hearsay, the identity and interests of the source undisclosed, this view ascribes extraordinary abilities to OIRA career staff, both to frustrate an agency determined to use negotiated rulemaking and to do so in opposition to the wishes of the President and his senior advisors. This is particularly unlikely to happen for two reasons: the OIRA career staff is too small to permit a self-interested obstructionist staffer to hide from White House officials, and agency officials have no difficulty informing the White House if they believe an OIRA career analyst or manager is "free lancing." Myths such as this are created and cultivated because OIRA career analysts, by temperament and institutional tradition, refuse to correct the record either publicly or anonymously.[110]

In fact, negotiated rulemaking suffers from several problems that its advocates do not fully appreciate. First, as much as negotiated rulemaking may reduce OIRA's influence, it also reduces the ability of agency officials and staff to do so. Thus, negotiated rulemaking is not feasible in any case where agency officials or staff have strong substantive views.[111]

Second, negotiated rulemaking is a rentseekers' delight. Only those willing, and able to "sit at the table" can have any influence on the outcome. This gives significant advantages to big businesses and big nongovernment organizations. Representatives of small entities cannot as easily afford the commitment of time and money. And they often drop out as negotiated rulemaking processes reach consensus by exhaustion.

Third, not every legitimate stakeholder is invited to participate, and some stakeholders choose not to participate to preserve their legal ability to challenge any deal that emerges. Even those who do participate often can renege on their agreement, for example by alleging that the final rule is different in some material way or that circumstances have changed. Regulatory negotiations appear to be more binding on the government than they are on certain stakeholders, which invites and cultivates distrust among the participants.

Finally, the public does not actually participate in negotiated rulemaking and its operations are not at all transparent. Negotiated rulemaking is the ultimate

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[109] Harter (Harter 2009). The "earlier note" referenced by Harter is not in OMB's docket.

[110] For an example of an undocumented assertion that OIRA career analysts free lance, see Rushing (2009).

[111] In a regulatory negotiation results in a deal that violates the President's regulatory principles, what should OIRA do?

inside game, one that leverages effectively the appearance of participatory democracy and transparency to produce highly self-interested backroom deals.[112]

B. Can draft rules be classified more accurately?

Under Executive Order 12,866, OIRA reviews only "significant" regulatory actions. Agencies make early preliminary determinations (§ 6(a)(3)(A)),[113] but the final authority always rests with the OIRA Administrator. Unfortunately, this arrangement puts a significant burden of proof on parties with the least information—the OIRA career staff and Administrator.[114] It is a well understood lesson in regulatory design that if the desired outcome is full disclosure, then the proper place to put the duty to disclose is on the party with better (or better access to) the information.

A new executive order should achieve a better balance in incentives. During the regulatory planning process, agencies develop considerable information about plausible benefits and costs that should be used to inform the initial draft rule classification. Agencies should be directed to assemble at least an executive summary of what they have learned and provide this to OIRA during the regulatory planning process (now governed by Executive Order 12,866, § 4). For reasons set forth in Section VI below, a strong case can be made for publicly disclosing this information.

Although a high degree of precision may not be feasible early in the planning process, even order of magnitude estimates can be very helpful in deciding how much analytic effort should be devoted first by the authoring agency and second by

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[112] The insider nature of negotiated rulemaking (i.e., "collaboration") is clear from the following recommendation:

> Each agency is directed to consider the use of collaboration where appropriate to develop new rules and policies. In doing so, the agency needs to determine what form of collaboration will best fulfill its needs. When making this decision, the agency should consult with representatives of the major interests that will be affected by the decision and clearly define the goals to be achieved through the collaboration (Harter 2009, p. 3, emphasis added).

[113] "Each agency shall provide OIRA, at such times and in the manner specified by the Administrator of OIRA, with a list of its planned regulatory actions, indicating those which the agency believes are significant regulatory actions within the meaning of this Executive order" (emphasis added).

[114] If an agency has initially classified a draft rule as not significant, Executive order 12,866 gives OIRA just 10 days to determine otherwise. OIRA can, and occasionally does, reclassify draft rules to categories associated with more intense scrutiny. However, no study has been performed estimating the proportion of draft rules that were improperly classified by the authoring agency.

the OIRA career staff.[115] An easy way to do this involves assigning regulations in the regulatory plan or Regulatory Agenda into rough categories, such as checking the appropriate box in Table 2 below. Logarithmic orders of magnitude are used to approximate broad ranges that span roughly a factor of two in each direction. Agencies should have no difficulty making these assignments, and for any assignment in the uppermost rows, provide sufficient documentation showing that the likelihood the draft rule really belongs in a lower row is remote. As more information becomes available, or the agency decides to take a different approach that materially affects the classification, classifications should be easily modified to account for these changed circumstances.

Table 2: Order of Magnitude Classification of Effects

Category	Benefits	Costs	Other Effects
"≈$10 million" [$1-15 million]			
"≈$30 million" [$15-60 million]			
"≈$100 million" [$60-150 million]			
"≈$300 million" [$150-600 million]			
"≈$1 billion" [$600 million +]			

The purpose of this exercise is not to force agencies to conduct comprehensive RIAs for every rule. Rather, it is to conserve agency and OIRA resources by making sure that analytic effort is proportional to the expected scope and scale of the rule. Such an approach would eliminate the discontinuity now present in Section 6 of Executive Order 12,866 between "significant" and "economically significant" rules.

An open and transparent process for making initial assignments would have beneficial spillover effects, most notably on the quality of benefit-cost analysis and public respect for its utility even among some of its current critics. This would enable the regulatory use of benefit-cost analysis to return to its proper role—the

[115] A similar recommendation is made by Posner (2009, p. 2, "require point estimates in all cases"), If point estimates are used, Viscusi (2009) says they should be averages and not "worst case or upper bound assumptions."

objective categorization, quantification, and monetization of each effect that can be objectively categorized quantified, and monetized, all for informing (not manipulating) regulatory decision-making.

C. Are there significant gaps in presidential regulatory review?

Since it was first established in 1981, presidential regulatory review has been limited to Executive branch agencies. However, OIRA has clear and unchallenged statutory authority to review information collection requests submitted by any "agency," as defined in 44 U.S.C. § 3502(1):

> [T]he term "agency" means any executive department, military department, Government corporation, Government controlled corporation, or other establishment in the executive branch of the Government (including the Executive Office of the President), or any independent regulatory agency, but does not include—
>
> (A) the General Accounting Office;
>
> (B) Federal Election Commission;
>
> (C) the governments of the District of Columbia and of the territories and possessions of the United States, and their various subdivisions; or
>
> (D) Government-owned contractor-operated facilities, including laboratories engaged in national defense research and production activities[.]

The "independent regulatory agencies" are subject to OIRA oversight with respect to their information management activities, including any covered request or demand for information from the public.[116] Over the 28 years during which presidential regulatory review has been conduced, however, OIRA has never reviewed a draft regulation from one of these agencies.[117]

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[116] The major independent regulatory agencies are the Commodity Futures trading Commission (CFTC), the Consumer Product Safety Commission (CPSC), the Federal Communications Commission (FCC), the Federal Deposit Insurance Corporation (FDIC), the Federal Energy Regulatory Commission (FERC), the Federal Housing Finance Board (FHFB), the Federal Maritime Commission (FMC), the Federal Reserve System (FRS), the Federal Trade Commission (FTC), the National Labor Relations Board (NLRB), the Nuclear Regulatory Commission (NRC), the Pension Benefit Guaranty Corporation, the Securities and Exchange Commission (SEC), and the U.S. International Trade Commission (ITC).

[117] The line is not absolutely clear. During the first 28 years, OIRA reviewed 71 draft regulations from the Equal Employment Opportunity Commission (EEOC), 16 draft rules from the National Indian Gaming Commission (NIGC), 15 draft rules from the Federal Mediation and Conciliation Service (FMCS), and three draft rules from the now-defunct Resolution Trust Corporation.

This gap in the presidential regulatory review process is often misunderstood.[118] Meanwhile, the independent agencies are prolific regulators, covering vast reaches of the American economy and society such as telecommunications, energy, nuclear power plants, pensions, and virtually every aspect of finance and private investment. Reasonable people may disagree about the causes of the 2008-09 financial crisis, or whether one agency or another failed to either predict it or take timely action to prevent it. However, it is impossible for presidential regulatory review to share any part of the blame. The agencies responsible for federal regulation are exempt from OIRA's oversight.[119]

Given the critical role now played by these independent agencies in responding to the financial crisis, this would be a good time to bring them under the aegis of presidential regulatory oversight. In Section III.A.3 above, I noted that the independent regulatory agencies have historically displayed little interest in benefit-cost analysis, preferring instead to conduct regulatory decision-making in the dark with respect to benefits, costs, and other effects. Proposals along these lines have been made many times, but for some reason every previous president has decided not to adopt them. President Obama should use this opportunity to break with tradition.

D. Is OIRA adequately staffed?

Over the years, the complexity of federal regulation has grown dramatically such that OIRA needs a much more diverse array of skills, educational backgrounds, and subject matter expertise than ever before. Former Administrator John Graham took the first step to add scientific expertise outside of economics, but the need for such expertise is much greater than can be managed by just a few professionals. Meanwhile, despite the need for expanded capability to review complex benefit-cost analyses, OIRA typically employs three or fewer economists.[120]

OIRA also has been given several additional responsibilities including annual Congressional reporting and vast increase in responsibility for information

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[118] Some opponents of presidential regulatory review criticize OIRA for "chiding" the "five protector agencies" "for their alleged excess." The five agencies listed include the Consumer Product Safety Commission, but OIRA has never reviewed a draft rule from the CPSC. See Steinzor (2009, p. 2).

[119] There is one agency whose rules are not exempt from OIRA review: the Office of Federal Housing Enterprise Oversight (OFHEO), which has had the responsibility for regulating the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac), and the 2 National home Loan Bank Boards. OFHEO is an independent entity within the Department of Housing and Urban Development, and thus is not genuinely an "independent regulatory agency." OFHEO's performance leading up to the financial crisis has been criticized, but its regulatory authority also has been very limited by statute.

[120] Some opponents of presidential regulatory review think that OIRA has about 40 staff economists. See Steinzor (2009, p. 2).

technology and policy. Yet, main OMB has slowly bled the number of career analysts such that it now has about half the number that it had twenty-five years ago. The quality of presidential regulatory review cannot but suffer if it remains understaffed.

Coincident with the issuance of a new executive order, President Obama should significantly increase the number of OIRA career analysts, and do so without putting OIRA in competition with main OMB for FTEs. To be sure, OIRA needs more top-quality economists, but it also needs to make service within the Office a legitimate, long-term career path for PhD engineers, biological and physical scientists, and biostatisticians. To make that happen, OIRA should be expanded to include new branches for economics, scientific risk assessment, and finance. Each branch would need an experienced leader with extraordinary technical credentials qualified for appointment to the Senior Executive Service.

VI. Disclosure, Transparency, and Public Participation

Executive Order 12,866 established, and former Administrator John Graham expanded, procedures for the disclosure of communications between OIRA and outside parties occurring during OIRA's review. These procedures formalized practices that former OIRA Administrator Wendy Gramm adopted in 1986.[121] Today, any member of the public can see exactly which outside parties meet with the OIRA Administrator (or the Administrator's designee) and read the oftentimes-voluminous written material that these parties provide.[122]

President Obama has promised greater transparency and public participation—admirable goals both—but it is crucial that the President's advisors take care to avoid making these goals freestanding commitments without regard to their benefits and costs to his own process.

A. Can OIRA review be made more transparent without sacrificing the President's need for confidentiality?

Presidential regulatory review deserves greater transparency than other activities OMB performs because, unlike for example budgetary matters, Congress does not have any subsequent role in the process once the President has made his decisions.[123] Nevertheless, the President and his advisors must be able to obtain candid appraisals of regulatory proposals. Regardless of the President's party, OIRA's role in regulatory review remains the same: to serve its one and only client,

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[121] Gramm (1986).

[122] See the OIRA portal for outside communications at http://www.whitehouse.gov/omb/oira_default/.

[123] Arbuckle (2007).

the President of the United States. If the confidentiality of communications between OIRA and the agencies or other parts of the Executive Office of the President is compromised, then presidential regulatory review will not go away; it will become much more costly, more difficult, more time-consuming, and result in more delay.

There always will be a tension between the democratic values of public participation on the one hand and the government's need for internal confidentiality on the other. This tension is needlessly exacerbated, however, by an unintentional byproduct of Executive Order 12,866, which directs agencies to submit draft RIAs to OIRA at the same time that they submit draft rules.[124] This process excludes the public from both the internal deliberations of the government concerning the regulatory decision (an exclusion that is entirely appropriate) and from the identification of alternatives and the characterization of benefits, costs, and other effects likely to result (from which exclusion is not proper at all). By maintaining confidentiality of both parts of the process, Executive Order 12,866 undermines both the President's legitimate claims and the public's confidence in benefit-cost analysis.[125]

The remedy for this is to disentangle the analytic and decision-making components of the process. The analytic component can be merged with OIRA's existing statutory authorities under the Paperwork Reduction Act.

B. How can analysis and decision-making be disentangled?

Over the years, several agencies (but most notably EPA) have experimented with a system whereby they design a "regulatory blueprint" well before regulatory decisions are made. This enables the agency to custom design how it will approach a given problem, then assign the relevant parts to the respective personnel with subject matter expertise. In principle, this allows senior managers to assemble the parts into a coherent whole before agency officials must confront the task of making decisions. In practice, the process can break down if components are not completed on time, if during the analytic phase unexpected issues arise, or if the manager of the process lacks sufficient authority to lead. By incorporating Regulatory Analysis Blueprints into the President's oversight system, agency managers can be assured of having the authority they need to shepherd such processes to timely completion.

Expediting the dates by which alternatives are identified and analyzed can simultaneously enhance transparency, public participation, and public trust. Doing this early does not interfere with the President's legitimate need for confidential advice at the decision-making stage. It would enable the public to fully participate in

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[124] See Executive Order 12,866, § 6(a)(3)(B).

[125] Rushing (2009) agrees that agency analyses are not transparent: "Cost-benefit analysis, as conducted, is notoriously opaque. It can be extremely difficult to determine how an agency arrived at its quantified and monetized figures, which is the source of many objections to cost-benefit as a tool." Disentangling the analytic from the policy components would greatly improve transparency.

the analytic component so that when the time comes for making decisions, the stage is set.

Thus, the new executive order should direct agencies to establish and follow a public process, initiated long before a draft proposed rule is written, to scope, design, and structure the regulatory analysis that will be used to inform decision-making. The products of this process—Regulatory Analysis Blueprints—would permit a vibrant and civil public discussion about how best to proceed. It would enable all parties to ensure that the alternatives they care about most are identified early and included in the analysis. If there are questions about data or analytic methods, raising these questions early will improve the quality of analysis and significantly enhance the transparency of the entire regulatory process. Any outside party could choose to perform a shadow RIA, thus creating external pressure on the agency to take quality very seriously.

The new executive order should include a default procedure whereby the agency staff, OIRA staff, and the public collaborate during the regulatory planning process once a future regulatory action has been initially classified (as described in Section V.B above). This procedure would tee up the analytic questions, not policy—identifying alternatives, specifying data and methods, and establish performance milestones for the public release of analytical components. All of the public, not just the representatives of Washington, DC-based interest groups, would have access to the same information. Their analytic (not policy) input could significantly improve the quality of information on which decisions are made.

Initially, this arrangement may be uncomfortable for both regulatory agency and OIRA career analysts. However, it also has significant benefits for both. For agency analysts, it would reduce the frustration of working months or years on a regulatory analysis only to be second-guessed during regulatory review by OIRA career staff. For OIRA career analysts, it would reduce the frustration of being able to identify at the end of the process analytic issues that, in their view, should have been handled much differently—and would have been, had they been consulted early. For both, they would know that during regulatory review the agency analysts' job is to show that they have adhered to the Blueprint and the OIRA analysts' job is to validate that they have done so. Whatever analytic issues arose during regulatory review should be small and easily managed.

Regulatory Analysis Blueprints would build on these disclosure practices. They also would help reconcile a longstanding conundrum within OIRA: How do they fulfill their statutory responsibility under the Paperwork Reduction Act, which requires that they establish and cultivate regular contacts with the public, with the virtual prohibition on ex parte communication that applies during regulatory review? The answer is to move the analytic component of regulation into the Paperwork Reduction Act process.

The PRA may be the most important procedural law that hardly anyone has heard of. As originally conceived by Senator Lawton Chiles, its main purpose was to

reduce the amount of paperwork burden imposed on the public by federal agencies. While this role remains important, the PRA also provides an excellent administrative tool for identifying data gaps and ensuring that they are filled in a timely manner, with appropriate attention to information quality. [126]Because the PRA process is public, it is a natural fit for housing the analytic tasks that should precede regulatory decision-making.

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[126] Revising the executive order to identify and close data gaps is a particular concern raised by Rushing (2009).

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