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Is Cost-Benefit Analysis for Everyone?

Cass R. Sunstein

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INTRODUCTION

Sometimes an initiative in law and policy receives near-universal support, on the ground that all will be helped and none will be hurt—or at least that most will be helped and few will be hurt, and those who are hurt lack a reasonable ground for complaint.

Something of this sort happened in the 1970s and 1980s, when a consensus developed around an idea that had been extremely controversial: the airline, trucking, and railroad industries should be deregulated. For the most part, deregulation has been a spectacular success, producing lower costs and better performance for consumers, while at the same time increasing jobs and raising wages.[1] Something similar happened in the 1990s, when a consensus developed around a formerly controversial view: that in many domains, regulation via economic incentives, such as emissions trading systems, should replace regulation via national command-and-control. Here too the evidence has been exceptionally encouraging,[2] justifying a kind of presumption, rebuttable to be sure, in favor of incentive-based approaches.

Might the same thing happen for cost-benefit analysis (CBA)? In a sense, it already has. Presidents Reagan, Bush, and Clinton have all issued executive orders requiring agencies to pay close attention to the costs and benefits of regulation, and it is highly likely that future American presidents, regardless of party, will continue on this path. Congress has shown great interest in requiring accounts of the costs and benefits of regulation,

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1. *See* Michael J. Trebilcock, Reforming Regulated Industries 29-30 (2000) (unpublished manuscript, on file with author) (discussing implications of deregulation versus prior monopolistic practices).

2. *See* A. DENNY ELLERMAN ET AL., MARKETS FOR CLEAN AIR: THE U.S. ACID RAIN PROGRAM 3-4 (2000) (describing increased usage of emissions trading and related approaches and growing disfavor toward centralized command-and-control pollution control methods).

and new legislation attests to this interest.[3] While Congress has not enacted a proposed "supermandate" that would require all agencies to make cost-benefit analysis the basis for decision, statutory law seems to be moving in this direction.[4] Federal courts are questioning regulatory absolutism of any kind, and both permitting and requiring agencies to engage in careful balancing of both sides of the ledger. A set of "cost-benefit default rules" is now in place in federal administrative law.[5]

Nonetheless, it would be premature to say that CBA has received the kind of social consensus now commanded by economic incentives and deregulation of airlines, trucking and railroads. Like Judge Williams, I believe that CBA should command such a consensus, at least as a presumption, and that the presumption in favor of CBA should operate regardless of political commitments. In short, a suitably devised system of CBA is for everyone—committed environmentalists, as well as those who think of environmentalism as a form of hysteria; people who believe that markets generally succeed, as well as those who believe that markets frequently fail; and people who think that workers deserve much more protection, as well as those who think that worker protection programs have gone much too far. Note in this connection that it was CBA that helped legitimate one of the largest environmental programs in American history—the complete phase-out of lead in gasoline. CBA also played a key role in federal protection of the ozone layer, through the phase-out of CFC's, which was imposed when the Council of Economic Advisors, under President Reagan, concluded that in light of the likelihood of numerous additional skin cancers and cataracts, severe, even draconian regulatory steps would be a complete bargain.

But while I think that a presumption in favor of CBA *should* command a consensus, I am not sure that it will, and I aim here to identify the reasonable grounds to resistance. In the end I am broadly in agreement with Judge Williams' remarks. I think that for government regulation in many domains, there should be a firm rule in favor of engaging in CBA, and a presumption in favor of making CBA the basis for decision. At the same time, I believe that Judge Williams has not sufficiently engaged certain objections to CBA—institutional in character—which might rebut the presumption. The basic problem is that CBA will sometimes fail CBA. My aim here is both to extend Judge Williams' claims by making some additional arguments in their favor, and also to uncover some of the strongest grounds for objecting to CBA in some contexts. Here I suggest that we are

3. *See, e.g.*, 2 U.S.C. §§ 1411, 1532, 1535 (Supp. V 1999).

4. *See* Cass R. Sunstein, *Cost-Benefit Default Principles*, 99 MICH. L. REV. (forthcoming June 2001).

5. *See id.*

ending a "first generation" debate about whether to do CBA, with general victory for the proponents. The "second generation" debate involves not whether to do CBA but how, and it is here that crucial issues remain.

These remarks are organized into six parts. Part I briefly sketches a simple argument for CBA, grounded less in neoclassical economics than in common sense, with an assist from cognitive psychology and democratic theory. Part II deals with some competing approaches, urging that they are inferior to CBA. Part III explores some theoretical objections to CBA, showing how the economic approach has serious limitations, but also that a reasonable form of CBA can defuse those objections. Part IV sets out more pragmatic concerns. Part V is a conclusion.

I. WHY CBA? OF ECONOMICS, COGNITIVE PSYCHOLOGY, AND DEMOCRACY

Many of the most popular defenses of CBA come from neoclassical economics.[6] For economists, goods, including the goods to be provided by regulation, should be measured in accordance with private "willingness to pay." It follows that we can assess the value of proposed regulations by comparing their aggregated costs to their aggregated benefits, thus measured. Studies suggest, for example, that the value of a statistical life, measured in terms of private willingness to pay, is between $3 million and $7 million.[7] If an air quality regulation will save twenty lives per year, it will produce between $60 million and $140 million in benefits. Suppose that the regulation would also produce $40 million in other benefits, because of the morbidity and aesthetic gains that it would generate. If the same regulation would cost $200 million, it would fail CBA.

But there are some problems with using private willingness to pay as the basis for assessing regulatory benefits. Some of these problems are internal to the economic framework; some of them amount to a rejection of that framework. I will spell them out in some detail in Part III below. For the moment, let us simply notice that Judge Williams says little about how to value the goods at stake in regulation, and rests on the (plausible but unexplained) intuition that valuation will be possible and perhaps not terribly controversial.

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6. Economists have, however, raised serious questions about CBA. For an overview and attempted response, see generally Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 YALE L.J. 165, 167-69 (1999) (defending usage of CBA by arguing that CBA (i) is a decision procedure, not a moral compass; (ii) must be tailored to fit each agency's needs; and (iii) when properly applied, is consistent with government policy that seeks to protect the overall welfare of its citizens).

7. *See* W. KIP VISCUSI, FATAL TRADEOFFS: PUBLIC AND PRIVATE RESPONSIBILITIES FOR RISK 20 (1992).

I do not believe that Judge Williams is wrong, but there are some hard issues in the background. In my view, the strongest argument for CBA rests not with neoclassical economics but with common sense, informed by behavioral economics and cognitive psychology.[8] The basic idea is that it is exceedingly difficult to choose the appropriate level of regulation without looking at both the benefit and cost sides. Without a full accounting, ordinary thinking about risks and their control is likely to go badly wrong, in such a way as to lead individuals, and governments, to favor policies that do less good than they might, or even more harm than good. Consider, for example, the remarkable finding that if we reallocated current spending to devote our resources to the most serious problems, rather than the less serious ones, we could save over 60,000 more lives each year, without spending a single penny more.[9]

Why do ordinary people make mistakes about risks? The most obvious problem is that most of us, most of the time, are inadequately informed. But there are more interesting points in the background. In thinking about risk, people tend to rely on heuristic devices, or mental short cuts, that often work well in daily life, but that also lead to systematic errors. For example, we tend to think that an event is more probable if an example is cognitively "available," in the sense that it comes easily to mind. It is for this reason that some people exaggerate small risks and neglect large ones. It is also for this reason that a highly publicized problem can produce a kind of rush to judgment (and regulation); it is for this reason too that people tend to think that more people die from accidents than diseases, whereas exactly the opposite is true.

The problem is compounded by social influences, through which false information can be spread rapidly, and even produce mass panics. If many people are starting to believe that genetic modification of food is dangerous, others may well be led to agree, not because they have reliable information, but because without that information, they tend to accept the views of others. This is perfectly rational at the individual level; if I know little, I might as well rely on what others think. But social influences can lead to grave public errors. These often take the form of "availability cascades," involving mass concern over small risks, with a strong call for governmental response.[10] Precisely because it draws attention to the actual risk,

8. *See* Cass R. Sunstein, *Cognition and Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1059, 1060 (2000) (discussing belief in alternative grounds for CBA).

9. *See* Tammy O. Tengs & John D. Graham, *The Opportunity Costs of Haphazard Social Investments in Life-Saving*, *in* RISKS, COSTS, AND LIVES SAVED: GETTING BETTER RESULTS FROM REGULATION 167, 172 (Robert W. Hahn ed., 1996).

10. *See* Timur Kuran & Cass R. Sunstein, *Availability Cascades and Risk Regulation*, 51 STAN. L. REV. 683, 685, 703 (1999) (contending that availability cascades can over-

and to the costs of addressing it, CBA can serve as a corrective here, ensuring that a governmental response will occur only if public fear is rooted in reality. CBA can also promote attention to problems that, while serious, are not producing much public attention; consider the phase-out of lead and the efforts to control indoor air pollution, a relatively serious danger.

Ordinary people also fail to see that health risks are on many sides of the problem, and that some regulations designed to protect health—for example, regulation of genetically engineered food—might harm health too. If young children are required to have their own seats in airplanes, parents might drive instead, and because driving is more dangerous than flying, the mandatory seat for children may actually kill children on balance. "Health-health tradeoffs" are omnipresent in regulation. Analysis of those tradeoffs is important in its own right and a significant step in the direction of CBA, which puts the adverse health effects of regulation on the public view screen.

There is a related but more general problem. Sometimes people are alert to the dangers at issue but fail to see the problems, economic and otherwise, with eliminating or reducing those dangers. CBA has the advantage of putting both sides of the picture before the public and relevant officials. And if people's emotions are getting in the way—as they sometimes do in the domain of risk—CBA can have a salutary "cooling effect" by showing that the emotional reaction is excessive. Of course, sometimes CBA will show that public concern is anything but excessive, or even that concerns and emotions need to be far more intense than they now are.

In these various ways CBA is admirably well suited to overcoming cognitive problems faced by ordinary people in thinking about risks. At the same time, CBA might well have significant democratic advantages. Of course, interest groups can manipulate CBA, a point to which I will return. But when there is no public accounting, interest- group control is especially likely. CBA can promote public attention to what is really at stake, in a way that increases both accountability and transparency. Well-organized private groups very often exploit the cognitive mechanisms just described—pushing regulation, or non-regulation, in their preferred directions. They deploy poignant anecdotes to suggest an approach that promotes their parochial interests. And all too often, citizens and their representatives do not attend to the serious questions at stake: the actual consequences of competing approaches. As Judge Williams suggests, CBA can improve the process and substance of decisions, by allowing people to evaluate agency decisions in an informed way, unclouded by avoidance of the central issues. There is thus a strong *democratic* case for CBA, one that

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whelm governments and that leaders should create disincentives against efforts to instigate widespread panic which occurs before all information is fully disclosed).

does not depend on controversial claims from neoclassical economics.

II. COMPETING, BUT WORSE, IDEAS

The argument for CBA is strengthened by comparing it with some alternatives. I will examine several such alternatives in Part IV below. For the moment consider three popular ideas which tend to compete with CBA: pollution prevention, the precautionary principle (well discussed by Judge Williams), and sustainable development.

A. Pollution Prevention

The idea of "pollution prevention" is designed to ensure that regulators prevent pollution before it enters the system, and do not rest content with "end of the pipe" controls imposed on polluting technologies.[11] As examples of pollution prevention, consider the phase-out of lead in gasoline, the use of solar power, and the substitution of electric cars for cars powered by gasoline. Advocates of pollution prevention tend to think that this is by far the most effective way to deal with pollution problems, partly because it promises larger and more dramatic pollution reductions, and partly because it does not rely on after-the-fact technological "fixes."

Pollution prevention often makes a great deal of sense; but sometimes it does not. Consider two examples: automobile emissions and fossil fuels. The best way to "prevent" automobile pollution would be to eliminate the internal combustion engines that power most trucks and cars. The best way to "prevent" pollution from current power sources would be to stop relying on fossil fuels, now used by utility power plants. Should the EPA be told, today, to ban internal combustion engines and coal combustion? If this would be a ludicrous conclusion—as I think it would be—it is because the costs of the ban would dwarf the benefits. Sometimes pollution prevention might even cause health problems, if it leads to unsafe substitutes. Sometimes pollution prevention just isn't worthwhile.

It seems to me that the case for pollution prevention rests, at bottom, on cost-benefit balancing—and that where the balance does not support regulation, pollution prevention is a mistake. None of this is of course to deny that sometimes projections of the future will involve a degree of guesswork and speculation. But when this is so, good CBA calls not for an artificially and deceptively definite number, but for a range of possibilities. What is not justified is to "prevent" pollution without an inquiry into the conse-

11. *See* BARRY COMMONER, MAKING PEACE WITH THE PLANET 41-46 (1990) (arguing that prevention is most effective anti-pollution mechanism, and that pollution controls only provide temporary solutions to long-term problems).

quences, good and bad, of prevention.

B. The Precautionary Principle

There is some important truth in the precautionary principle. The truth rests in the acknowledgement that a small probability (say, one in 100,000) of serious harm (say, 100,000 deaths) deserves serious attention. The fact that a danger is unlikely, even very unlikely, is hardly a decisive point against regulatory controls. But as Judge Williams illustrates, dangers are often on both sides of the equation, as the case of genetic modification of food suggests. Suppose, as some people believe, that genetic modification of food runs afoul of the precautionary principle. It is also true that a failure to allow genetic modification might well result in many deaths, and a small probability of many more—hence the failure to allow genetic modification seems to run afoul of the precautionary principle (unless we foolishly take existing practice, and what will emerge from it, as desirable). The precautionary principle, taken for all that it is worth, is paralyzing: it stands as an obstacle to regulation and non-regulation, and to everything in between.

A competent CBA takes especially good account of what makes sense in the precautionary principle, by incorporating low-probability risks of significant harms. CBA subsumes this risk, as it does all others, into the overall assessment. Of course nothing in CBA precludes a policymaker from concluding that a 1/10,000 risk of 100,000 deaths is worse, or less bad, than a 1/1000 risk of 10,000 deaths. This is a political judgment, not a technical one to be decided by mechanical use of the numbers.

C. Sustainable Development

The notion of "sustainable development" has had an extraordinary influence in the environmental debates, so much as that it now serves as a kind of symbol for serious commitment to environmental protection. And that influence has undoubtedly been salutary, at least in part, by drawing attention to the future consequences of current actions. But the notion of sustainable development is highly ambiguous. Sometimes sustainable development is said to refer to "development that occurs on a scale that does not exceed the carrying capacity of the biosphere."[12] To the extent that endorsement of sustainable development is meant as a criticism of approaches that are literally "unsustainable" in the sense that future generations will lack environmental goods—clean air and water, for example—everyone

12. *See* ROBERT PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 1182 (3d ed. 2000).

should support sustainable development. Any minimally sensible policy will ensure decent lives and options for future generations. Who could be opposed to that?

But outside of the easy cases for environmental protection, the real question is not "sustainable" development or "unsustainable" development; it involves what level of resources to commit to environmental protection. Often there is no simple line to divide the sustainable from the unsustainable. If certain regulatory steps would increase "sustainability" but cause a great deal of suffering and misery, simply by virtue of their expense, a sensible administrator will take that point into account—and in the international context, perhaps ask for financial help from wealthier countries, help that is probably required from the standpoint of justice. In short, the goal of sustainable development is in no conflict with CBA. CBA fully supports the idea that sustainability is a desirable goal, and helps give content to the harder question, which is how much should be done to improve environmental quality in poor as well as wealthy nations.

III. WHAT'S WRONG WITH CBA? ECONOMICS

Like deregulation and economic incentives, CBA has been pressed principally by those interested in economic approaches to regulation. But Judge Williams does not defend the economic approach to valuation; he says little on that question. In refusing to endorse the "willingness to pay" approach in an unqualified way, I think that he is on firm ground, for that approach has many problems.

My aim in this section is twofold. I attempt to disaggregate some of the objections that have been launched against economic approaches to CBA. I also aim to show, in Judge Williams' spirit, how it is possible to accommodate the most reasonable objections through a suitable form of CBA. Since some kind of CBA seems to make undeniable sense, the question is how to use the objections to make CBA work better, not to jettison it entirely. Ultimately I suggest, also in Judge Williams' spirit, that it should be possible to reach an "incompletely theorized agreement" on CBA—that is, an agreement that rests on a variety of theoretical positions, and that does not require acceptance of any especially controversial commitments, theoretical or otherwise.

A qualification: Some of the issues discussed here are exceptionally complex, and in a brief treatment of this kind, I will be able only to skim the surfaces. My hope is that even a brief and perhaps reckless treatment will help suggest the contours of an approach to CBA that does not accept the economist's most controversial claims about valuation.

1. If we rely on people's private willingness to pay, as measured by their actual choices, we might occasionally come up with bad numbers,

since people are not always well informed when they take risks. If people are not well informed, we will have a hard time figuring out, from people's behavior and statements, how much they are really willing to pay to avoid risks. It follows that any use of private willingness to pay, to generate values, must be defended by showing that people who take risks have adequate information about what they are doing. A general concern about the lack of adequate information would justify some skepticism about using actual behavior as the basis for numbers, at least in settings where people are unlikely to know about the relevant risks.

2. In some cases CBA, used in purely economic terms, would be skewed against the poor. Poor people do not have much ability to pay, and hence they are not willing to pay much for goods from which they would greatly benefit. In principle, poor people might "count" little or not at all in a CBA based on private willingness to pay. Rich people have a great deal of ability to pay, and hence they might be willing to pay a great deal for risk reduction. But this problem can be corrected, perhaps by using a uniform number of valuing benefits, a number that will not go down when poor people are being counted, or up when rich people are being counted.[13] In any case it is perfectly possible to design a system of CBA that does not count rich people more or poor people less.

3. Some willingness to pay should not count in the regulators' calculus; some "goods" should not be provided even if people would be willing to pay for them. For example, some people would be willing to pay a fair bit to harm other people, and to harm animals and the environment. These preferences should not be recognized by law. Even utilitarians believe that some preferences, such as sadistic and malicious ones, deserve no recognition in ethics or politics. In fact, regulatory agencies committed to CBA do not take into account sadistic or malicious preferences, and here they are quite right.[14]

4. In addition to knowing the benefits and costs of regulation, it is necessary to know *who* bears those costs and enjoys those benefits, and the simple notion of CBA, as understood in neoclassical economics, seems indifferent to that question. Suppose, for example, that an occupational safety and health regulation would have a total cost of $600 million, and that the monetized benefits would be $400 million (including, let us say, forty lives saved per year, and hence $200 million in monetized savings from fatalities averted). Is it clear that this regulation should not go for-

13. *See* W. Kip Viscusi, *Risk Equity*, 29 J. LEGAL STUD. 843, 853-869 (2000) (discussing cost benefit analysis and alternative equitable risk policies).

14. *See* Matthew D. Adler & Eric R. Posner, *Implementing Cost-Benefit Analysis when Preferences are Distorted*, 29 J. LEGAL STUD. 1105, 1116-25 (2000) (surveying agency practice and demonstrating that agencies adjust valuations to correct preference distortions).

ward? For various reasons it is not. If the people who are saved are children or teenagers, the uniform "lives saved" number might undervalue the relevant benefits. (Perhaps we should look to "life years saved," not merely lives saved.) If the 40 people are predominantly poor, we might want to give extra weight to the risk imposed on them. And what does the $600 million mean, concretely? Does it mean that prices will increase, by a little, for many people? That cost might be worth incurring. So, too, if the consequence of the $600 million expenditure would be a reduction in annual profits for companies that already make billions. Or does the cost mean that people, including poor people, will lose their jobs?

An ideal cost-benefit analysis would tell us something about the *incidence* of both costs and benefits. It might well make sense to say that the "bottom line" numbers will not be decisive when an "incidence analysis" shows that those numbers should be adjusted to take account of the identify of the winners and losers. One way to handle this problem would be to give distributional weights to certain effects. It is not clear whether we are now able to produce detailed analysis of the incidence of regulatory costs and benefits; this is an area for much further inquiry.

5. People have private preferences, but as citizens, they also have public values, or altruistic goals; and sometimes private preferences, as expressed in markets, will inadequately capture those values and goals. It is not clear that people's market valuations should be taken as decisive for purposes of regulatory policy. The best way to handle this would be to adjust the market values, or to use some other number, when there is good reason to do this. For example, it might be thought that pristine areas, such as national parks, should be valued more highly than market valuation would suggest. An articulated agency judgment to this effect, based on reasonable arguments, could support an unusually high valuation of aesthetic and related goals. If the market number, for a statistical life, is somewhere between $3 million and $7 million, perhaps that can be the starting point, to be modified where there is reason for modification. It is important here that this range appears to be about the median of agency practice as well; the same starting point is therefore defensible by reference to both market behavior and agency practice.

6. A somewhat technical point, very briefly noted here:[15] the usual "willingness to pay" numbers entirely disregard the fact that people care partly about their *relative* economic position, and not only about their *absolute* economic position. This is a serious mistake. If asked to give money in isolation, people will offer less than they would if they are asked

15. *See* Robert H. Frank & Cass R. Sunstein, *Cost-Benefit Analysis and Relative Position*, 68 U. CHI. L. REV. (forthcoming 2001).

how much money they would give, assuming that everyone else is giving the same amount too. It follows that people will be willing to pay significantly more for regulatory benefits if everyone else is paying the same amount. Because all or most people do pay for many regulatory benefits, an approach based on private willingness to pay will substantially understate actual values. The best response to this point is not to abandon CBA, but to adjust the numbers upward in accordance with this point—an entirely feasible enterprise.

7. It seems wrong to say that all goods at stake in regulation are fully "commensurable" and should be assessed only in terms of dollars. It is important to know what the numbers mean—what it is that they are meant to capture. If, for example, members of an endangered species are at risk, the CBA should identify that point, and not rest content with the monetized value of their lives. This objection suggests, very reasonably, that a good CBA should present a qualitative as well as quantitative account of consequences, as in fact is conventional agency practice today. The "bottom line" numbers should be accompanied by an understanding of what they are meant to capture (also conventional agency practice today).

My overall conclusion is that the notion of CBA can be specified in many different ways and that a purely economic approach, based on private willingness to pay, faces serious objections. But it is possible to undertake CBA in a way that takes account of the best of these objections from a theoretical point of view. The result would be to produce numbers that are cautious about private willingness to pay—but that are numbers nonetheless, taken not as a replacement for a full inquiry into what matters, but as an informative part of that inquiry.

IV. WHAT'S REALLY WRONG WITH CBA: WHEN CBA FAILS CBA

With respect to agency practice, the strongest objections to CBA do not seem to be ones of basic principle. CBA can be adjusted in multiple different ways (as Judge Williams appears to suggest). The strongest objections to CBA involve institutional issues. Judge Williams does not seriously engage these objections. The basic point is that in some settings—probably not the usual ones—CBA is, on balance, inferior to one or more alternatives, not in principle, but because a consideration of institutional points shows that CBA will not work as well.

This essentially pragmatic claim might be explained through the suggestion that in some circumstances, CBA itself fails CBA. Consider two possible examples.

A. Aspirations and Implementation

National ambient air quality standards are set by the EPA. As a matter of principle, it seems to make sense to ask the EPA to consider both the costs and the benefits of such standards—especially because the benefits of regulation usually continue to increase with regulatory stringency, and there is rarely a point at which exposure to air pollution suddenly switches from "safe" to "unsafe." If more stringent regulation would prevent five to fifteen deaths, surely more stringent regulation makes sense if the cost would be (say) $5 million to $15 million. But perhaps the same would not be true if the cost of doing so would be $900 million to $1.2 billion. This simple point seems to suggest that CBA should be the basis for choosing ambient standards. Small gains are worth producing at low cost, but not at a cost of billions. Of course hard questions of valuation would remain. But at first glance, national ambient standards should be based on CBA, not on an inquiry into benefits alone. Hence it is now being argued, in the Supreme Court, that the Clean Air Act is not reasonably read to require EPA to produce national standards only on the basis of health considerations.

But in fact things are not so clear. Under the Clean Air Act, national standards, once set, do not automatically bring all states of the nation into immediate compliance. National standards merely initiate a process, one of whose components include the development of state implementation plans. Cost turns out to be highly relevant both in the design of such plans and in their implementation. The point is confirmed by the fact that several decades after the promulgation of national standards, many areas of the country are still not in compliance. Of course noncompliance reflects many things, including public and private intransigence and government vulnerability to the power of well-organized private groups. But one of the things that noncompliance reflects is simple attention to costs. Costs emphatically do play a role in the Clean Air Act—not in the issuance of national standards, which are based largely on health,[16] but during implementation and in the development of compliance dates.

In these circumstances, it is possible to make a highly pragmatic defense of the current situation under the Clean Air Act. The EPA sets out health-based standards, which operate not as ordinary law, but instead as goals or aspirations, establishing a level of ambient air quality that EPA thinks all

16. It is possible, however, to think that cost plays a tacit role in the choice of levels, even if the EPA purports to rely solely on health considerations. If costs are playing a role, but that role is not disclosed, the standard-setting process has a democratic deficit. *See* Cass R. Sunstein, *Is the Clean Air Act Unconstitutional?*, 98 MICH. L. REV. 303, 308-09 (1999) (arguing that EPA decision-making process on clean air standards may have been affected by costs, but that CBA process has been isolated from review by the public).

Americans should enjoy. States are encouraged to meet those goals. But if costs turn out to be extremely high, that will be relevant, and deadlines will be understood in light of the need to be reasonable under the circumstances. At least in theory, health-based national standards, alongside cost-sensitive implementation, might be better than an approach that would call for CBA-based national standards. Nothing in the basic defense of CBA shows why this is false.

I am not sure that the pragmatic defense is convincing. The system of aspirations-and-implementation-delays has serious problems of its own, not least from the democratic point of view. The idea that there is a "safe" level is an evasion of the real question—what level of risk is acceptable—and serious rule of law problems are created by delaying deadlines for compliance. All I mean to show is that in principle, it is possible that the best outcomes are produced by coupling health-based standard setting with consideration of costs at a later date.

B. Judicial Review, Paralysis by Analysis, and Unfairly Armed Adversaries

A popular alternative to CBA, one that I have not discussed thus far, is to require that regulation be "feasible" or "achievable." At first glance, this standard appears somewhat mysterious. These terms are far from transparent. But as generally understood, such statutes put the focus not on benefits but on costs, and on costs in a particular way: they forbid an agency from regulating to a point that is neither (a) technically feasible, because the relevant control technology does not exist, nor (b) economically feasible, because the industry cannot bear the cost without significant or massive business failures.[17] If this is the understanding, there is a large difference between CBA and standards of feasibility or achievability. What I am going to suggest here is that such standards might be preferred, not in principle, but on the ground that they greatly ease the agency's task, and in a way that makes people far better off on balance.

1. Feasibility vs. CBA

Suppose, for example, that a regulation would cost $800 million and that it would save twenty lives per year. It is easy to imagine that this regula-

17. *See* Am. Textile Mfrs. Inst., Inc. v. Donovan, 452 U.S. 490, 508-09 (1981) (holding that Congress mandated that the "benefit" for workers take the highest priority unless compliance makes benefit unfeasible); AFL-CIO v. OSHA, 965 F.2d 962, 980-82 (11th Cir. 1992) (describing guidelines to determine technical and economic feasibility and stating that an agency must prove technical and economic feasibility by marshalling "substantial" evidence and by demonstrating its usefulness to impacted sectors).

tion would be entirely feasible—in the sense that the industry would face no technical problems in meeting it, and also in the sense that it would be practicable for industry to bear the cost. But it is also easy to imagine that such a regulation would fail cost-benefit analysis, in the sense that $800 million expense would not be justified by the monetized savings. If a statistical life is valued at $5 million, for example, the benefit ($100 million) would be only one-eighth the cost. It is also easy to imagine that a regulation might not be feasible, but that it might satisfy any requirement of cost-benefit balancing. Suppose, for example, that a regulation would cost $2 billion, that industry could not bear that cost without massive dislocations, but that the regulation would save 5,000 lives. In some cases, the cost-benefit requirement is more protective, not less protective, of intended beneficiaries of regulatory programs.

So far, perhaps, things are clear enough. But there is a problem. Feasibility is not an on-off switch. Any significant increase in costs is likely to prove "not feasible" for at least some companies. As the costs increase, the number of companies for whom the regulation proves "not feasible" will increase too. Perhaps there is a set point showing a large-scale increase in the number of companies who cannot bear the cost while continuing in business. But it is more likely that as the costs grow, the number of companies who cannot bear the cost grows too. In these circumstances, what sense is made by a "feasibility" or "achievability" constraint? Perhaps the motivating idea here is that for most regulations, companies must comply, unless a large number of them can show that they cannot comply and continue. And certainly this is a relatively simple inquiry in most cases. What makes little sense is the suggestion that agencies can pick a point that is "feasible," and not go beyond that point. In these circumstances, CBA seems both different from feasibility and superior to it, because it asks the right question—not whether controls are "feasible" (neither a sufficient nor a necessary condition for good regulation), but whether they are justified, all things considered.

2. *An Institutional Objection to CBA*

What, then, accounts for the evident popularity of requirements that regulation be "feasible" or "achievable"? The best defense is institutional. From the standpoint of those concerned with safety and the environment, a cost-benefit standard might be thought to introduce undue opportunities for industry to stall the process, partly because of the prospect and actuality of judicial review. While a feasibility standard seems worse in principle, it might be better in practice, if and to the extent that it allows the agency to accomplish tasks that would otherwise be undermined by well-armed private litigants. A key point here is that as compared with CBA, a require-

ment that regulation must be "feasible" greatly improves an agency's chances in court—a conclusion that is well-supported by the record of agencies on appeal. Under feasibility requirements, agencies generally win. Under cost-benefit requirements, agencies frequently lose. Agencies and their lawyers know this in advance, as do statute writers. In these circumstances, it is possible that the nation is better off with legally valid feasibility-based regulations, which agencies actually can impose, than with CBA-based regulations, if these will be invalidated in court.

In the real world, this may be a convincing defense of an approach to regulation that departs from CBA. Ironically, its justification rests on a form of CBA: the benefits of a feasibility standard outweigh the costs, all things considered. Whether the argument is convincing depends on the real-world operation of the competing standards. And perhaps the best response to the argument is not to abandon CBA, but to ensure a deferential form of judicial review of agency action when CBA is required—a form that is not so deferential as to turn CBA into a carte blanche to agencies, but one that is deferential enough not to make those fearful of underregulation think that if anything at all is to be done, CBA must be avoided like the plague.

Note here that lawyers opposing costly regulation are likely to be both talented and well-funded, and such lawyers are likely to be able to find holes in any agency decision that is rooted in CBA, even if the agency has done its job quite well. What is necessary is for those who endorse CBA to find a judicial role that does not make people reasonably fear that whatever CBA means in principle, it will guarantee agency inaction in practice.

CONCLUSION: COSTS AND BENEFITS FOR EVERYONE

My suggestion here has been that properly understood, CBA deserves wide approval—no less than the deregulation movement of the 1970s and 1980s and the1990s shift to economic incentives as opposed to national command-and-control. Indeed, I believe that with respect to regulatory policy, CBA should have the same relationship to the first decade of the twenty-first century as its predecessors had to the closing decades of the twentieth.

The best defense of CBA relies not on controversial claims from neoclassical economics, but on a simple appreciation of how we all make mistakes in thinking about risks—and on an understanding that when people err, governments will err too. Properly understood, CBA should help us save lives, not only money. This is not at all a claim that in the areas of health, safety, and the environment, American government suffers from a systematic problem of "overregulation." It is far more accurate to say that we have both overregulation and underregulation, or what has been called a

situation of simultaneous "paranoia and neglect."[18] The best starting point for assessing the situation involves a collection of the effects of regulation and, to the extent possible, an attempt to quantify those effects, at least as a tool for attacking the most serious problems, and for ensuring that we do not spend substantial resources on problems that are small or even trivial.

It is time to go well beyond "1970s environmentalism," with its emphasis on the existence of serious problems and the need for prompt action, to an approach that attempts to assess the magnitude of problems and the need for good priority-setting. At the same time, I have suggested that the bottom-line numbers should not be decisive, and that a more qualitative understanding of the interests at stake might well justify regulation, even if an assessment of the raw numbers suggests otherwise. I have also suggested that in some circumstances, institutional considerations will argue against cost-benefit analysis, largely for pragmatic reasons. What is most important here is to see that the case for cost-benefit balancing does not rest only or even mostly on economic grounds—and that people of widely divergent views can support a suitably specified form of CBA. The emerging questions involve not whether to do CBA but how; it is to those questions that we should now be turning.

18. *See* John D. Graham, *Making Sense of Risk: An Agenda for Congress*, *in* RISKS, COSTS, AND LIVES SAVED: GETTING BETTER RESULTS FROM REGULATIONS 183, 183 (Robert W. Hahn ed., 1996) (noting that resources are being misappropriated because of social attention on certain issues and that phenomenon can be averted by "embracing a risk-analysis approach to public decision making").