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Public Interest Comment<sup>1</sup> on  
The Environmental Protection Agency's  
Advanced Notice of Proposed Rulemaking:  
Increasing Transparency in Considering Costs and Benefits  
in the Rulemaking Process

Docket ID No. EPA-HQ-OA-2018-0107

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The George Washington University Regulatory Studies Center

The George Washington University Regulatory Studies Center improves regulatory policy through research, education, and outreach. As part of its mission, the GW Regulatory Studies Center conducts careful and independent analyses to assess rulemaking proposals from the perspective of the public interest. This comment on the Environmental Protection Agency's ANPRM on Increasing Consistency and Transparency in Considering Costs and Benefits in the Rulemaking Process offers suggestions for improving the value of the Agency's proposed action, and it does not represent the views of any particular affected party or special interest.

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<sup>1</sup> This comment reflects the views of the author, and does not represent an official position of the GW Regulatory Studies Center or the George Washington University. Note that multiple scholars from the Center may file comments in this docket; in each case reflecting his or her own views. The Center's policy on research integrity is available at <http://regulatorystudies.columbian.gwu.edu/policy-research-integrity>.

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## Introduction

In this ANPRM EPA sets a worthwhile goal of improving the consistency and transparency of the agency's use of economic analyses to inform its rulemaking decisions. As noted in the request for comment, the agency already has detailed guidelines for economic analysis that have been developed internally, as well as applicable guidance from the Office of Management and Budget. Yet, in practice, the analyses that accompany EPA's regulations are often controversial, and sometimes are found by courts to have flaws serious enough to undermine the legality of the agency's actions.

This comment will begin by exploring the reasons why EPA might choose to conduct a rulemaking on the general topic of how it considers benefits and costs, and then will discuss some of the legal considerations that should be brought to bear on the effort.

## Why a Rulemaking?

EPA seeks comments on “whether and how EPA should promulgate regulations” to promote consistency and transparency in the consideration of costs and benefits. It notes that “this ANPRM does not propose any regulatory requirements.” Which raises the obvious question, why use a rulemaking for this purpose? Whom does the Agency propose to regulate?

As far as I am able to tell, the agency does not (and should not) propose to place any restrictions on the ability of the public to comment on the costs and benefits of its rules. In the course of any particular rulemaking, affected individuals or companies or trade associations – or even research professors – may raise novel issues, different analytical techniques, or alternative perspectives that the agency had not thought of. Such comments will need to be fairly evaluated in the context of the rulemaking in which they are offered; there is no basis to categorically exclude from consideration any comments that do not conform to the agency's pre-established rubric. Certainly it would not advance transparency for the agency to use a rule to silence the critics of its practice of economic analysis, whatever perspective they might bring.

Moreover, the agency does not (and should not) propose to put any restrictions on the conduct of interagency review of its proposed rules. Other agencies have their own expertise and experience with economic analysis, and interagency review often generates an informative dialogue that improves the final result and improves the consistency of decisions across the government. Indeed, the agency is currently engaged in just such an animated dialogue with the Department of Transportation regarding the benefits and costs of increasingly stringent CAFÉ standards.

So, if the agency does not propose to regulate economic analysis and criticism from the public nor from other agencies, whom does it propose to regulate? The ANPRM is pretty clear that the agency proposes to regulate itself. The goal would be to articulate general standards of economic analysis that the agency expects to adhere to. But it is not necessary to engage in rulemaking to

achieve that end. The agency could simply do a better job of adhering to its own guidelines for economic analysis and to those issued by the Office of Management and Budget. So, what exactly would a rulemaking add?

The main advantage that a rulemaking has over guidance is that it invites judicial review.<sup>3</sup> That is, a rulemaking not only allows a court to review the rule itself, it also codifies a consistent set of standards for economic analysis that courts might apply when reviewing future agency regulatory decisions. This promises not only to improve the consistency of the agency's own practices, but also to improve the consistency of judicial interpretation of the agency's statutes.

It is important to be explicit about the possible judicial review of, and future reliance upon, a rule governing the agency's consideration of benefits and costs, because it helps to answer some of the other questions that the ANPRM poses about the appropriate content of a rule. For example, a rule that articulates a consistent set of principles for interpreting statutory provisions might well be useful to the courts. A rule that went into great detail about the proper use of hyperbolic discounting, computable general equilibria, and Monte Carlo simulations, . . . not so much.

### **“Benefit-Cost Analysis as a Check on Administrative Discretion”**

In a recently published article<sup>4</sup> I suggested that we should view benefit-cost analysis in rulemaking, not simply as an internal tool for the agency's use, but as an external check on administrative discretion. BCA increasingly is (and ought to be) scrutinized not only by reviewers in OMB and elsewhere in the executive branch, but also by the courts. Here is the abstract:

Benefit-cost analysis (BCA) continues to be the principal tool used by American presidents to guide the discretionary decisions of regulatory agencies under their supervision, and increasingly it is viewed by the courts as an important consideration for agencies to take into account in justifying their regulatory decisions. This paper argues that BCA is properly viewed, not simply as a technocratic planning tool, but as a solution to a principal-agent problem. Specifically, it is intended to test whether an agency can demonstrate that it is acting in the public interest. Viewed in this light, some common analytical practices used by regulatory agencies become questionable. A BCA should not, for example, use an assumption that consumers are irrational to support a claim that coercive regulation is making them better off. Consumer sovereignty is

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<sup>3</sup> Generally, if an agency follows proper administrative procedures, its guidance documents should not be subject to judicial review. See Brian Mannix, “Yes, Judge, We Do Think About Reviewability,” available here: <https://fedsoc.org/commentary/blog-posts/yes-judge-we-do-think-about-reviewability>.

<sup>4</sup> Brian Mannix, “Benefit-Cost Analysis as a Check on Administrative Discretion,” *Supreme Court Economic Review*, 24 SCER 155.

axiomatic in BCA, and an agency that uses BCA to justify its actions must accept individuals' judgments about their own welfare.

The article in its entirety is relevant to many of the questions asked in EPA's ANPRM. In order to be sure that it is available in the record, I have attached the full text of the article to this comment.

## Legal Authority for a Rule on Benefits and Costs

The ANPRM cites, in addition to the agency's authorizing statutes, Executive Order 12866, OMB's Circular A-4, and EPA's own Guidelines for Preparing Economic Analysis. In order to be useful for judicial review, however, the subsequent NPRM will need a much more robust statement of legal authority. If courts are to be invited, by this rule, to look for more consistency in the consideration of benefits and costs across different statutes, they will need some legal basis for doing so, beyond the texts of the individual statutes themselves.

One logical place to look for cross-cutting authority is the Constitution. Any statute that delegates regulatory authority to an agency must be consistent with the Article I Section I, which vests all legislative powers in the Congress. For a statutory delegation of regulatory authority to be constitutional, it must provide an intelligible principle to guide agency discretion, and it must confine agency discretion "within two banks," so that a reviewing court may determine whether the agency has ventured outside the limits of its delegated authority. Benefit-cost balancing is just such a principle. "To borrow familiar phrases from *A.L.A. Schechter Poultry Corp. v. United States*, *Panama Refining Co. v. Ryan*, and earlier cases, BCA supplies a convenient 'intelligible principle' where Congress has failed to supply a different one, and it handily erects 'two banks' to prevent administrative discretion from overflowing too far in one direction or another."<sup>5</sup>

That is not to say that all the details of economic theory can be read into the Constitution. But it certainly makes sense that agencies and courts should read every statute to allow, or even to require, a balancing of benefits and costs when making regulatory decisions.<sup>6</sup> While Congress can specify a different principle, it does not have a blank slate. It cannot delegate raw legislative powers to administrative agencies.

Agencies and courts should avoid interpreting statutory language to instruct an agency to ignore costs altogether, not only to preserve the constitution's separation of powers, but also for due process reasons. Advance notice and the opportunity to comment will do little good to an injured party, if the administrative agency issuing a regulation has decided in advance that it will not

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<sup>5</sup> Ibid.; citations omitted, but available in the article, attached.

<sup>6</sup> Cass Sunstein, "Cost-Benefit Analysis and Arbitrariness Review" (March 20, 2016). Harvard Public Law Working Paper No. 16-12. Available at SSRN: <https://ssrn.com/abstract=2752068> or <http://dx.doi.org/10.2139/ssrn.2752068>

take account of any harm that its decisions are causing. As regulations increasingly are used to mandate cross-subsidies – compelling coal power to subsidize solar, or gasoline consumers to subsidize ethanol production, for example – the need for injured parties to have a forum to seek relief becomes even greater. Regulations that rob Peter to pay Paul may well be defensible on public policy grounds, but they cannot be justified by looking only at the effects on Paul.

Of course, in contrast to the administrative agencies, Congress does indeed have the power to enact laws that disregard any harm that they cause. But members of congress are directly accountable at the ballot box for their actions. If Congress wants to instruct an agency to take some action without regard to costs, it must do so in terms that leave no ambiguity for the executive or the judiciary to resolve – not only so that the agency understands its mandate, but also so that the voters can understand exactly what their representatives have commanded.

Michael Livermore and Ricky Revesz, among other authors, have explained the awkwardness of asking an agency to act without regard to costs, and they accurately report an incident in my own experience:

Brian Mannix, EPA policy director under Administrator Johnson, recalls that before a briefing about the 2008 standard for ozone, the Administrator turned to him and said “don’t tell me what the costs are, but if it looks like I’m about to make a decision that ends civilization as we know it—please kick me under the table.” The request was meant as a joke, but as Mannix points out, it highlights the sense of “helplessness and unease” that EPA feels in the face of such an “absurd” statutory mandate.<sup>7</sup>

In addition to the nondelegation doctrine and the due process clause of the constitution, EPA should look to the Administrative Procedure Act for a cross-cutting legal authority that would support a rule aimed at greater consistency across regulatory decisions. In “The Cost-Benefit State” and subsequent works, Cass Sunstein has documented<sup>8</sup> the evolution of benefit-cost analysis as a key driver of regulatory decisions – and the judicial review thereof. He notes that the failure to consider costs as well as benefits might render a decision arbitrary and capricious under the Administrative Procedure Act.<sup>9</sup>

Whether for constitutional reasons or statutory reasons, it seems clear that a consideration of costs cannot be treated as optional by an administrative agency. “Despite the 5-4 decision, *Michigan* actually counted nine votes for the principle that costs cannot be ignored. Writing for

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<sup>7</sup> Michael A. Livermore and Richard L. Revesz, “Rethinking Health-Based Environmental Standards,” *NYU Law Review* 89:1184.

<sup>8</sup> Cass Sunstein, 2003. *The Cost-Benefit State: The Future of Regulatory Protection*. Chicago: American Bar Association.

<sup>9</sup> Cass Sunstein. “Cost-Benefit Analysis and Arbitrariness Review.” *Harvard Environmental Law Review* 41:1–41.

the four dissenters, Justice Kagan argued that, unless Congress specifies otherwise, ‘an agency *must* take costs into account in some manner before imposing significant regulatory burdens.’ (135 S. Ct. at 2717).” [Emphasis added.]<sup>10</sup>

As Sunstein argues,<sup>11</sup> it appears that “the cost-benefit state” has arrived, as judicial review of agency decisions gradually adopts the same balancing principles that presidents have incorporated into executive orders on regulation for decades. President Clinton’s E.O. 12866, still in effect today, will celebrate its 25th birthday later this year. A robust rulemaking on the consideration of benefits and cost will draw on the relevant case law, outlined in the attached article, as well as on the Constitution, the APA, and long-established administrative practice.

## Who Should Issue a Rule on Benefits and Costs?

Note that none of the considerations discussed above is particular to the Environmental Protection Agency. Every regulatory agency struggles with these questions, and the need for consistency – as in the ongoing CAFÉ standards rulemaking – cuts across agencies, as well as across statutory lines. Moreover, if benefit-cost balancing is to serve as a check on administrative discretion, then the controlling rule ought to be written by an authority external to the agencies.

The logical place to assign responsibility for such a rule is within the Executive Office of the President – specifically to the Office of Management and Budget’s Office of Information and Regulatory Affairs (OIRA). The President, by executive order, could delegate to OMB/OIRA the authority to issue a rule promoting transparency and consistency. In a 2016 blog post,<sup>12</sup> “Coherence in the Executive,” I argued that the president is uniquely able to impose coherence on the sprawling regulatory state. “Coherence is an aspect of faithful execution of the laws; it denotes an administrative consistency, not just across time and place, but also across hundreds of different regulatory programs busily pursuing inconsistent aims.”

A broader, interagency regulation on the consideration of benefits and costs could help achieve greater coherence in regulation, as well as greater transparency and consistency. Such a rule is sorely needed. “Atomistic administration of regulation is cacophonous, chaotic, cumulatively stifling, arbitrary and capricious in the whole if not in the parts, and ultimately unsustainable.”<sup>13</sup>

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<sup>10</sup> Brian Mannix, 24 SCER 155.

<sup>11</sup> Cass Sunstein, Keynote remarks at Symposium on Benefit-Cost Analysis and the Courts. The George Washington University Regulatory Studies Center, Washington, DC. October 11, 2016.  
<https://regulatorystudies.columbian.gwu.edu/benefit-cost-analysis-and-courts>.

<sup>12</sup> Brian Mannix, “Coherence in the Executive,” available here:  
<http://www.libertylawsite.org/liberty-forum/coherence-in-the-executive/>

<sup>13</sup> Ibid.

Can the President authorize OMB to issue such a regulation? For precedent, see the ANPRM issued by the White House Council on Environmental Quality, just one week after EPA's own ANPRM. CEQ is seeking comments on its regulations governing the preparation of Environmental Impact Statements under the National Environmental Policy Act. NEPA applies to major agency actions other than regulations, and it requires many of the same familiar desiderata – consideration of alternatives, adequate public notice, fact-finding and analysis of benefits and costs – before an agency takes a final action.

But where did CEQ – like OMB part of the Executive Office of the President – get the authority to issue binding rules? NEPA, enacted in 1969, did not explicitly delegate rulemaking authority to CEQ. Instead, each agency implemented NEPA in its own way, with its own interpretations and procedures, sometimes effected by rule and sometimes by guidance.

In 1977 President Carter signed EO 11991, which for the first time tasked CEQ to write implementing regulations, which it finalized in 1978. Many questioned whether CEQ could acquire regulatory powers by executive order.

In *Andrus v. Sierra Club*,<sup>14</sup> the Supreme Court answered that question by taking favorable notice of the CEQ regulations. This was dicta; the regulations were not before the court – indeed, they were not even yet effective. Nonetheless, the case resolved all doubt about CEQ's rulemaking authority.

In 1977, however, President Carter, in order to create a single set of uniform, mandatory regulations, ordered CEQ, “after consultation with affected agencies,” to “[i]ssue regulations to Federal agencies for the implementation of the procedural provisions” of NEPA. Exec. Order No. 11991, 3 CFR 124 (1978). The President ordered the heads of federal agencies to “comply with the regulations issued by the Council. . . .” Ibid. CEQ has since issued these regulations, 43 Fed. Reg. 55978-56007 (1978), . . .

CEQ's interpretation of NEPA is entitled to substantial deference. See *Warm Springs Dam Task Force v. Gribble*, 417 U. S. 1301, 417 U. S. 1309-1310 (1974) (Douglas, J., in chambers). The Council was created by NEPA, and charged in that statute with the responsibility “to review and appraise the various programs and activities of the Federal Government in the light of the policy set forth in . . . this Act . . . and to make recommendations to the President with respect thereto.”

In truth, there were two other considerations that likely influenced the court. One is that in its first few years, NEPA had generated an explosion of environmental litigation, as major federal actions around the country were challenged. Not only did every federal agency have its own

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<sup>14</sup> 442 U.S. 347 (1979).

reading of the Act, but federal district courts, in reviewing agency actions, were coming up with their own interpretations of exactly what NEPA required. All of this conflicting case law was working its way to the Supreme Court to be resolved. The *Andrus* Court was undoubtedly grateful that someone else had taken responsibility to review the outstanding legal and policy questions, sort through them in systematic fashion, and impose some transparency, consistency, and coherence on the NEPA process.

The final consideration was simply the quality of the CEQ rulemaking. Under Chairman Charles Warren, CEQ General Counsel Nick Yost did a masterful job of consulting the agencies, reviewing the case law, and producing a balanced, thorough, and authoritative final rule. Six years before *Chevron* was decided, CEQ secured the court's deference the old-fashioned way. They earned it.

Under the Constitution, and under NEPA, the APA, and countless authorizing statutes, the President has the authority to supervise federal agencies and the responsibility to see that the laws are faithfully executed. Where warranted, he may delegate to an appropriate agency the authority to issue a binding rule governing the discretionary decisions made by agencies under his supervision. Just as presidents have done with NEPA and major federal actions, the president could authorize an agency to issue regulations governing the consideration of benefits and costs in rulemaking, and could order the affected agencies to comply with it. If it is done well, such a regulation would be entitled to deference by the courts. I recommend that the administration consider proceeding on this broader front, with the rulemaking that EPA has begun.



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# Benefit-Cost Analysis as a Check on Administrative Discretion

Brian F. Mannix\*

*Benefit-cost analysis (BCA) continues to be the principal tool used by American presidents to guide the discretionary decisions of regulatory agencies under their supervision, and increasingly it is viewed by the courts as an important consideration for agencies to take into account in justifying their regulatory decisions. This paper argues that BCA is properly viewed, not simply as a technocratic planning tool, but as a solution to a principal-agent problem. Specifically, it is intended to test whether an agency can demonstrate that it is acting in the public interest. Viewed in this light, some common analytical practices used by regulatory agencies become questionable. A BCA should not, for example, use an assumption that consumers are irrational to support a claim that coercive regulation is making them better off. Consumer sovereignty is axiomatic in BCA, and an agency that uses BCA to justify its actions must accept individuals' judgments about their own welfare.*

## 1. INTRODUCTION

Benefit-cost analysis (BCA) is now widely known and used, but it is also widely misunderstood—by many of its advocates as well as its detractors. This paper will examine some of the strengths and weaknesses of BCA as a normative science, and, yes, that phrase is an oxy-

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moron, which is a source of much of the controversy. BCA is an imperfect answer, but often perhaps the best available answer, to the question of how a society should go about making collective but not unanimous choices. Nowhere is its use more contested than in its application to decisions by regulatory agencies.

Although Congress typically does not include BCA as an explicit requirement in statutes that delegate regulatory authority, it has nonetheless become the standard tool by which presidents seek to guide the discretionary decisions of regulatory agencies under their supervision. Building on narrower precedents by Presidents Nixon (see Schultz 1971), Ford (see Exec. Order No. 11,821, 39 Fed. Reg. 41,501 [1974]), and Carter (see Exec. Order No. 12,044, 43 Fed. Reg. 12,661 [1978]), Ronald Reagan issued the first of a series of executive orders that requires executive branch regulators to conduct BCA (Exec. Order No. 12,291, 46 Fed. Reg. 13,193 [1981]); the most recent was signed by Bill Clinton and remains in effect today (Exec. Order No. 12,866, 58 Fed. Reg. 51,735 [1993]).<sup>1</sup>

Courts, too, have found reason, when reviewing administrative decisions, to look for some form of balancing of benefits and costs. To borrow familiar phrases from *A.L.A. Schechter Poultry Corp. v. United States* (295 U.S. 495 [1935]), *Panama Refining Co. v. Ryan* (293 U.S. 388 [1935]), and earlier cases, BCA supplies a convenient “intelligible principle” where Congress has failed to supply a different one, and it handily erects “two banks” to prevent administrative discretion from overflowing too far in one direction or another. More recent rulings have found that the failure to consider costs as well as benefits might render a decision arbitrary and capricious under the Administrative Procedure Act (see Sunstein 2017).

Michael Greve (2016) laments in a recent blog post that “[t]he administrative state is having a grand old time because we have disaggregated a once-unified constitutional theory into a jumble of silly little doctrines (‘intelligible principle,’ ‘arbitrary and capricious’) that do not and cannot do any serious work.” Certainly no mere economic analysis can repair the damage suffered by our constitutional theory and practice. But given the existence of an expansive administrative state and the undeniable need to manage it, this paper argues that BCA, properly understood, can help accomplish some serious work.

Over twenty years ago Cass Sunstein (1996) wrote a paper (and later a book [Sunstein 2003]) tracing and applauding the development of BCA as a guiding principle in administrative law. In a George Wash-

<sup>1</sup> As of September 8, 2017, President Donald Trump, like his two immediate predecessors, had issued several executive orders that supplement Executive Order 12,866 without repealing it (see, e.g., Exec. Order. No. 13,771, 82 Fed. Reg. 9,339 [2017]).

ington University symposium in October 2016, entitled “Benefit-Cost Analysis and the Courts,” Sunstein announced that the Cost-Benefit State is now upon us (Sunstein 2016b). The panelists largely agreed with that assessment, citing a trio of Supreme Court cases that illustrate the trend (Williams et al. 2016).

In *Whitman v. American Trucking Associations, Inc.* (531 U.S. 457, 468 [2001]), the Court stated that the EPA could not consider costs as a factor in setting ambient air quality standards without a clear “textual commitment” in the statute. In a concurring opinion, however, Justice Breyer argued that “other things being equal, we should read silences or ambiguities in the language of regulatory statutes as permitting, not forbidding, this type of rational regulation” (531 U.S. at 490). Then in *Entergy Corp. v. Riverkeeper, Inc.* (556 U.S. 208, 223 [2009]), the Court applied *Chevron* deference to rule that “it was well within the bounds of reasonable interpretation for the EPA to conclude that cost-benefit analysis is not categorically forbidden” in setting a standard under the Clean Water Act. Finally, in *Michigan v. EPA* (135 S. Ct. 2699 [2015]), the Court read the phrase “appropriate and necessary” in a section of the Clean Air Act as a statutory mandate requiring EPA to weigh costs against benefits. Justice Scalia wrote for the majority that “[o]ne would not say that it is even rational, never mind ‘appropriate,’ to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits. . . . No regulation is ‘appropriate’ if it does significantly more harm than good” (135 S. Ct. at 2707).

Nor is this doctrinal shift likely to pass into history with the passing of Justice Scalia. Despite the 5-4 decision, *Michigan* actually counted nine votes for the principle that costs cannot be ignored. Writing for the four dissenters, Justice Kagan argued that, unless Congress specifies otherwise, “an agency must take costs into account in some manner before imposing significant regulatory burdens” (135 S. Ct. at 2717).

In 2016 the University of Pennsylvania’s *The Regulatory Review* hosted a lively debate over the evolution of BCA as a default principle for evaluating regulatory decisions (Graham and Noe 2016a; 2016b; Sinden 2016b). In a more recent Federalist Society podcast, “How Should ‘Administrative Law’ be Taught Today,” some panelists argued that BCA has become so important to administrative law that it should be part of the core curriculum in our law schools (Farber et al. 2016). If so, we should get it right.

In explaining BCA, many cite Ben Franklin’s Prudential Algebra (Decision Science News 2012), which involves making a list of pros and cons and weighing them against each other before making a consequential decision. But that analogy is misleading because it suggests there is a single autonomous decision-maker. In applying BCA to regulation, it is important to stress that BCA is intended not simply to

inform a solitary decision-maker, but to help solve a serious principal-agent problem. The 2016 Nobel Memorial Prize in Economics was awarded to two economists for their contributions to solve a similar problem in contract theory (Nobel Media AB, n.d.). How, for example, might a board of directors compensate a corporate CEO to align her incentives with the interests of the shareholders? Who should bear which risks, and to what degree? Such compensation schemes are of little use, however, when we think about the incentives faced by government regulators. How can we ensure that public servants use their considerable powers in the service of the public interest? What exactly do we mean by the public interest anyway?

Proposals abound for tweaking BCA to correct for various perceived weaknesses: giving extra weight to the elderly, to the young, to cancer victims, or to “jobs.” But before discarding it or amending it, we should take the trouble to understand how BCA works, why it makes the assumptions that it does, and what ethical considerations have shaped its design.

## 2. DEFINING THE “GENERAL WELFARE”

The fact that BCA is used to make collective decisions is what distinguishes it from many similar methodologies (such as discounted cash-flow analysis) that are used by private individuals or businesses. BCA purports to evaluate a decision from the perspective of multiple affected parties whose views and interests are not aligned. We sometimes see a simplistic description of the BCA procedure as follows: assume that individuals are utility maximizers when they make their own decisions, and then choose government policies that maximize the sum of the affected individuals’ utility. Up until about seventy-five years ago this was a pretty accurate description of how it worked. But during the twentieth century (along with most of the rest of microeconomics), BCA made the transition from neoclassical welfare economics, in which individuals were presumed to have quantitative utility functions, to modern welfare theory, in which individuals are presumed only to have ordered preferences. This is not the place to try to explain that transition; suffice it to say that if cardinal utility functions exist, they do not matter because we cannot observe them. All we can observe are the choices people make in the marketplace, and from those we can infer an *ordinal* set of preferences.

But that inference does require a fundamental assumption: that individuals’ preferences are transitive, so that they can be put in an unambiguous order. Sometimes this is called internal consistency, but more often the transitivity assumption is what economists mean when

they say an individual has “rational” preferences. If I prefer A to B, and B to C, one can assume that I prefer A to C. I am certainly free to change my mind, depending on my circumstances and mood. But if I am persistently irrational (i.e., intransitive), my preferences will not fit very well into any economic model.

How big of a problem is that? Well, irrational behavior is not exactly rare. But that does not mean that it is economically important. Anyone with consistently irrational preferences can be turned into a “money pump”—a person could charge me a penny to exchange B for A, another penny to exchange A for C, and a third penny to exchange C for B. We are back where we started, except that someone else has some of my money. Soon, unless I learn to be more rational, I will be penniless. For this reason, economists generally are comfortable assuming that intransitive individual preferences do not play a major role in shaping the economy.

Transitivity of preferences can be even more important on a large scale. A nation that displayed intransitive preferences in its trade patterns, for example, would soon find that it had nothing left to trade. But there is a problem: rationality does not automatically scale up. This brings us to the Condorcet Paradox (Coleman [2009] 2014), first described by the Marquis de Condorcet in 1785.

Suppose there are three options, A, B, and C, and a committee of three rational individuals to decide. Alice’s ranking is  $A > B > C$ ; Bob’s is  $B > C > A$ ; Chris’s is  $C > A > B$ . It is plain to see that, for each option, there exists another option that is preferred by a majority of members. And the remarkable thing is that not only do a majority agree that a better option exists, but a majority agree on a *specific* option that would be preferable to the one chosen. And yet going there does not solve the problem. No matter what option is chosen, a majority will agree that it is inferior to a particular alternative. Two members agree that A is inferior to C; two agree that C is inferior to B; and two agree that B is inferior to A. Thus, every option seems to be an inferior one.

Condorcet published in 1785. Many mathematicians since then have tackled the problem, including Charles Dodgson, better known as Lewis Carroll, the author of *Alice’s Adventures in Wonderland* and *Through the Looking Glass*. But a major advance (or perhaps retreat) was made by Kenneth Arrow, winner of the 1972 Nobel Prize in Economics, while a graduate student at Stanford. He proved what we know as the Arrow Impossibility Theorem (Arrow 1950). In mathematical form it can be complex, but here is how the Stanford Encyclopedia of Philosophy describes it:

Which procedures are there for deriving, from what is known or can be found out about [people’s] preferences, a collective or “so-

cial" ordering of the alternatives from better to worse? The answer is startling. Arrow's theorem says there are no such procedures whatsoever. (Morreau 2014)

That is certainly a discouraging result. Is it really impossible for rational individuals to come up with a consistently rational way to decide things as a group? There are some escapes from the theorem's logic. One is the dictatorship option. If Alice is able to impose her own preferences on everyone else in society, then policy choices will be easy; there is nothing to debate. Many households and firms work this way, but it is not attractive on a larger scale.

Another escape is the set of easy problems—the Pareto improvements that everyone can simply agree on. This is the domain of voluntary market transactions. Since dictatorship is so unpleasant, markets should be used to try to solve problems as much as possible—establishing property rights in fisheries, for example, so that markets can work their magic, making it unnecessary to come up with some kind of group-think fishery policy or dictator of fish.

That leaves a set of problems for which markets are not working well—public goods, externalities, and the other familiar market imperfections cataloged in economic textbooks. People will have different opinions about how large or how important this set is and whether imperfect collective decisions will produce better results than imperfect market outcomes. It is indisputable, however, that there is a very large set of government programs purporting to occupy this space, busily pursuing what they call the public's business. Hundreds of government agencies, wielding delegated regulatory powers, use force against their own citizens—necessarily making at least some of them worse off. How can we ensure that these regulatory agencies act in the public interest? How can we know whether the harm that they do to some is nonetheless justifiable because it promotes the general welfare?

To answer this, BCA applies the Kaldor-Hicks test (see Hicks 1939; Kaldor 1939), in which those who support a particular policy outcome can compensate those who oppose it, thereby changing the minds of those in opposition. A decision passes the Kaldor-Hicks criterion if, when such compensating side payments are made, the decision becomes unanimous.

Unanimous sounds good! Such decisions are called *potential* Pareto improvements—they would be Pareto improvements and would be accomplished by the market instead of the government if the market were better able to overcome transaction costs and find these bargains. (And, thanks to advances in technology, the market is getting better at finding bargains all the time.) But with a few exceptions, like

the ingenious Clarke tax (see Mannix 2013), the compensating payments are not actually made. Thus the Kaldor-Hicks methodology does not constitute an exception to Arrow's theorem because the choices that are evaluated are not identical to the choices that are actually made.

The Kaldor-Hicks criterion has another noteworthy strength, and another weakness. The strength is that it generally produces a transitive ranking of options, and so it appears to be "rational" in that narrow sense (but see Scitovsky 1941). The weakness is that the rankings depend on the initial distribution of income or wealth, which is taken as a given.<sup>2</sup>

Surely when the framers sought "to promote the general welfare," they were not thinking of a Kaldor-Hicks composition of the ordinal preference functions of modern post-neoclassical welfare economics. Nor did they imagine the vast reach of the modern administrative state. Yet I will argue that the economists' definition of general welfare, however technocratic it sounds, and despite its acknowledged flaws, is actually very well suited for managing the administrative state.

### 3. THE PUBLIC INTEREST AND THE REGULATORY STATE

How can we ensure that government officials use their powers in the public interest? Advocates of BCA lament that it is too often used simply to defend decisions that an agency has already made, rather than to inform decisions as it makes them. This is a fair criticism but a bit naïve. If an agency did not have to defend its decision on benefit-cost grounds, why would it bother to use BCA at all? Agency heads and program managers have varied backgrounds, but typically they have an abundance of the specialized subject-matter expertise that we hear so much about, and they often have strong opinions about what options they would like to pursue. Some of them may be predisposed to use economic analysis, but probably not very many. If they have broad authority to make decisions and if their decisions are not going to be questioned, they may simply default to some version of the "dictator" paradigm: "My own preferences are rational (i.e., transitive), so we'll just go with those."

<sup>2</sup> This acceptance of the prior distribution of wealth, along with the assumption that the ranking of policy choices is independent of whether compensating differentials are actually paid, renders BCA an inappropriate tool for evaluating policies which have the goal of redistributing income or wealth.



But our government is one of checks and balances, not of independent decision-makers. Government is force, and in the words of George Washington, the use of force—particularly by a government against its own citizens—must be justified (see Richman 2011). Agency officials are not principals; they wield whatever power they have as agents of the people. They ought to be able to demonstrate that their discretionary official actions serve the public interest, promote the general welfare, or otherwise advance the common good.

Because of Arrow's impossibility theorem, it is not possible to find a fully satisfactory answer to the question of what constitutes the public interest, the general welfare, or the common good, which is one reason the use of governmental force should be limited in pursuit of these goals. But where the government is applying force, BCA can help distinguish those actions that appear to be justified from those that clearly are not.

Who should apply that test? That depends on the context. BCA is used for possibly millions of routine government decisions—far too many to be reviewed by an independent authority. To take one example, the Federal Emergency Management Agency (2015) uses BCA software to evaluate applications for hazard-mitigation grants. This might be used to decide what size culvert should be installed where a road crosses a stream or which structures (and which infrastructures) need to be reinforced against earthquakes or whether to build a levee around a town or move the town altogether. Depending on the complexity, many of these BCAs can be completed in less than an hour using FEMA's software.

Agency analyses of such routine decisions, completed by a competent and unbiased analyst, can usually be relied upon. But when a decision is more consequential for the agency—potentially affecting the size of its budget or the scope of its authority—some external review is necessary. BCA requires judgment calls that are easily tilted to skew the result, and no agency can be relied upon to produce an objective analysis when the result is contrary to the agency's own interest.

When possible, it is helpful to make a distinction between spending programs, like FEMA's grant program above, and regulatory programs, like the National Highway Traffic Safety Administration's (n.d.) CAFE standards for cars and trucks. In the case of spending, the use of force is generally confined to the collection of revenues that provide the ways and means to support the program. That allows for specialization. The spending agency will have the greatest expertise in its particular mission and (we hope) will have some enthusiasm to accomplish the program successfully. If anything, the agency will be over-enthusiastic, and will seek to spend too much unless it faces a budget constraint. The size of the agency's budget is a good measure of the



burden the program imposes, and accordingly, it will get scrutiny from the Congress and the president, which will be conscious of the cumulative burden of taxation and debt, and which will be politically answerable to the public if that burden gets too great.

This is how spending has been organized since 1921 when the Bureau of the Budget (then BOB, now OMB for Office of Management and Budget) was created. The details of spending decisions are left to the cognizant agency, subject to scrutiny by budget analysts at OMB and the Congressional Budget Office (CBO) and the staffs of congressional committees. Congress and the president participate in a legislative budget process, setting agency limits, and adjusting them annually. Unable to spend as much as they would like, agencies may engage in cost-effectiveness analysis that enables them to make the most of what resources they have. Over time and with experience, unsuccessful programs will be scaled back, while successful ones will be permitted to grow.

Well, that is the theory, anyway. The budget process in practice is riddled with pathologies too numerous to catalog here. But the notion that Congress and the president set binding limits on agency spending is unassailable. Allowing agencies to decide their own level of spending would be as unthinkable as allowing employees to decide their own salaries.

Regulatory programs are entirely different. When Congress delegates to administrative agencies the authority to make binding law, the ability to use force against citizens becomes dispersed among hundreds of officials. Some authors have made proposals to pull this together into a kind of regulatory budget, and the debate continues on whether that is feasible or desirable (see Pierce 2016; Dudley 2016; Sinden 2016a). President Trump has instructed agencies to offset new regulatory costs by repealing or revising older regulations, effectively freezing the total cost of regulation and providing a foundation for a possible future regulatory budget. It is too soon to tell how successful this effort will be (see Exec. Order No. 13,771, 82 Fed. Reg. 9,339 [2017]). One of the initial challenges will be the development of a robust definition of “regulatory cost”—something that BCA itself does not require (see Mannix 2017).

Estimates of the total cost of regulation vary over a wide range, in part because of the difficulty of defining exactly what constitutes a regulatory cost. But the economic cost imposed by regulatory agencies seems likely to be at least an order of magnitude larger than the budgetary cost. This comparison says nothing about whether any individual regulation is worthwhile; only a consideration of both benefits and costs can tell us that. But it does remind us of the importance of giving close scrutiny to the weighing of benefits and costs. Other-

wise, regulatory agencies are effectively empowered to spend without limit.

#### 4. BEHAVIORAL ECONOMICS IN THE BENEFIT-COST FRAMEWORK

“You must be the best judge of your own happiness,” Jane Austen ([1815] 2003) wrote in *Emma*. But the statement is also a keystone principle of microeconomic theory, and it provides the epistemic foundation that makes benefit-cost analysis possible. The only way to know people’s preferences is observe the choices that they themselves freely make; all inferences about the “public” interest must begin there.

Behavioral economists have poked holes in this principle by demonstrating in laboratory studies, as well as in the field, that people will often make irrational or inconsistent choices, so simple models of rational individual preferences are not always good at predicting the actual behavior of real people. What influence, if any, should these findings have on public policy? Very little, I argue.

Ten days after taking the oath of office in 2009, President Obama issued a memorandum that among other things sought to “clarify the role of the behavioral sciences in formulating regulatory policy” (74 Fed. Reg. 5,975 [2009]). He was widely expected to follow this up with an executive order incorporating the behavioral economics perspective into federal regulatory analysis. The expected executive order did not emerge until 2015 (Exec. Order No. 13,707, 80 Fed. Reg. 56,365 [2015]), and by then, it included only mild exhortations for agencies to deploy the “nudge” concept that had been popularized by Cass Sunstein, President Obama’s Administrator of the Office of Information and Regulatory Affairs (see Thaler and Sunstein 2008).

Nonetheless, regulatory agencies have increasingly used consumer irrationality to justify regulatory interventions—even where there is no apparent market failure. They attribute economic benefits amounting to many billions of dollars to regulatory actions that give consumers nothing new and simply deprive them of their preferred choices. How exactly is that beneficial? Regulators even make the presumption that they are far better at judging businesses’ interests than are the businesses themselves. Ted Gayer and Kip Viscusi (2013) challenge this form of regulatory analysis:

How can it be that consumers are leaving billions of potential economic gains on the table? . . . Moreover, how can it also be the case that firms seeking to earn profits are likewise ignoring highly attractive opportunities to save money? . . . Rather than accept the implications that consumers and firms are acting so

starkly against their economic interest, a more plausible explanation is that there is something incorrect in the assumptions being made in the regulatory impact analyses.

As argued above, benefit-cost analysis, as applied to regulation, should be viewed less as a *tool* to inform the regulators and more as a *test* to see whether the regulators are acting as faithful agents of the public's interest. From this perspective, it becomes clear that behavioral economics can be permitted only a limited role in justifying regulatory action. When a government agency proposes to use force against its own citizens, one cannot accept the explanation that "the public doesn't know what's good for them, but we do!"

In 2015, Susan Dudley and Brian Mannix engaged in a Point/Counterpoint exchange with Hunt Allcott and Cass Sunstein on the question of how observable anomalies in consumer decision-making—"internalities" in their parlance—should be used in Regulatory Impact Analysis (see Burkhauser 2015; Allcott and Sunstein 2015a; 2015b; Mannix and Dudley 2015a; 2015b). Despite agreement among all four authors on the general principles of applying benefit-cost analysis to regulation, they sharply disagreed about the treatment of internalities.

Allcott and Sunstein (2015b) argue, "In markets where there are internalities, numerous papers have shown theoretically that taxes or other forms of government intervention can increase welfare." They see behavioral insights as providing a natural extension of conventional welfare economics, stating:

Notice here the direct analogy between internalities and externalities: . . . this model simply restates the standard Pigouvian model of externality taxation. It is thus useful to think of internalities as "externalities that individuals impose on themselves. (Allcott and Sunstein 2015b)

In contrast, Mannix and Dudley (2015a) insist on consumers' sovereignty over their own welfare.

"[C]hoice architecture" cannot produce benefits by destroying choice. . . . Allowing regulators to control consumers "for their own good"—based on some deficiency in the consumers themselves rather than any failure in the marketplace—is to abandon any serious attempt to keep regulatory policy grounded in an objective notion of the public good.

Any truthful analysis of benefits and costs will tell us what consumers think, not what the regulator thinks consumers should think. We do not allow the government to change the results of elections because of some theory of irrational and biased voters;

neither should we allow it to distort consumers' revealed preferences in an economic analysis.

The economics literature is filled with proposals for "nudges" to encourage individuals to make better (that is, more accurately, self-interested) choices—a kind of soft paternalism that sounds harmless enough. In the hands of regulators, however, behavioral economics has quickly evolved into a ready-made excuse for a hard, and even oppressive, paternalism. This is inconsistent with the more traditional and rigorous form of benefit-cost analysis, which evaluates regulators' conformance to the public's preferences, rather than the other way around.

Ultimately, we insist that our regulators start from a presumption of rationality for the same reason that we insist that our criminal courts start from a presumption of innocence: not because the assumption is necessarily true, but because a government that proceeds from the opposite assumption is inevitably tyrannical. (Mannix 2010)

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