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MEASURE FOR MEASURE: COST-BENEFIT ANALYSIS AND ENVIRONMENTAL POLICY

Irma S. Russell*

I. INTRODUCTION

Legal scholars as well as engineers say “[y]ou [m]anage [w]hat [y]ou [m]easure.”¹ This statement suggests that effective measurement is essential to influencing outcomes—whether those outcomes relate to physical phenomena, policy goals, or legal interests. While the statement may be more accurate in its negative form (i.e., you do not manage what you do not measure), measurement is clearly essential to decision-making today. Without effective measurement, legal systems or policies produce little more than rhetoric and symbolism.² Recognition of this point is not new. In his timeless problem plays, *Measure for Measure* and *The Merchant of Venice*, Shakespeare dramatized the competing values of freedom, economic enterprise, and human life.³ The contemporary version of the debate regarding enterprise and human safety is nowhere more intense

* Dean, University of Montana School of Law. The author expresses appreciation for the comments of friends and colleagues on earlier versions of this article, including Michael Gerrard, Tracy Hester, and Sidney A. Shapiro. She thanks Houston T. Musick, Jared Nelson, Michael Matison, and Archibald Miller for their helpful research assistance.

1. Louis Lowenstein, *Financial Transparency and Corporate Governance: You Manage What You Measure*, 96 Colum. L. Rev. 1335, 1335 (1996); see also Rae Zimmerman, *Issues of Classification in Environmental Equity: How We Manage Is How We Measure*, 21 Fordham Urb. L.J. 633 (1994).

2. While symbolic action has a place in the ordering of nations and individuals, it is insufficient protection for important interests such as those represented by legislation for public safety.

3. The central plot line of *Measure for Measure* involves laws against licentious behavior. Another famous Shakespearian problem play is *The Merchant of Venice*, which also explores the balancing of interests. It presents a contract with a repayment date and an agreed remedy for breach of the obligation: a pound of flesh for the payor, taken from any part of his body at the option of the payee. This remedy includes the certain result of death for the breaching party if the plaintiff chooses the pound of flesh of the debtor's heart. In *Measure for Measure*, the Duke leaves Lord Angelo in charge of the city, but, rather than leaving town, the Duke takes on a disguise as a friar and observes the actions of Lord Angelo as he serves as the substitute authority. Angelo creates a moralistic regime, seeking to rid the city of brothels and unlawful sexual activity by strictly enforcing long-established laws. He arrests and sentences Claudio to death on the ground that he has impregnated his lover outside of marriage. When Isabelle, Claudio's chaste sister, pleads with Angelo to spare her brother, Angelo agrees to release Claudio if Isabelle will have sexual intercourse with him. Angelo refuses to pardon Claudio, and the Duke returns and reveals his identity. Angelo confesses to his misdeeds, and Claudio is pardoned. Amy Ross, *Vienna Then and Now: The Impact of Shakespeare's Measure for Measure on the Twenty-First Century Legal Profession*, 46 S.D. L. Rev. 781, 782, 786–800 (2001).

Critics, for lack of a better way to describe the play, have referred to *Measure* as a “problem play,” defined as:

A play in which we find a concern with a moral problem which is central to it, presented in such a manner that we are unsure of our moral bearings, so that uncertain and divided responses to it in the minds of the audience are possible and even probable.

Overall, *Measure* presents readers with no absolutes. The play is comprised of a “desperate, and surely deliberate, confusion of values.”

Id. at 784 (footnotes omitted).

than in the area of cost-benefit analysis and environmental policy. The central premise of this Article is that because effective decision-making is not possible without accurate measurements and comparisons of interests, judges, and policy makers must incorporate explicit measurements and comparisons of legal interests.

The occasion of these reflections is the celebration of Professor Cass Sunstein's work. Although numbers alone cannot give the full measure of Professor Sunstein's contribution to legal thought, the numbers are impressive and revealing. In more than 30 books and over 220 articles, essays, and reviews, Professor Sunstein covers topics as diverse as behavioral economics and worst-case scenarios, judicial decision making, and the cost-benefit state.⁴ His writing on environmental policy registers over 150 articles and numerous books,⁵ including nearly 100 articles on the topic of global climate change, arguably "the greatest environmental challenge facing the world today."⁶ That Professor Sunstein's contribution is immeasurable is clear from its influence on public opinion as well as academics.⁷ Study of his vision of choice architecture has broad applicability, including the power to nudge consumers toward healthy and "green" choices.⁸ He has explained in memorable ways the fact that, in reality, human interactions do not function in the ways attributed to the economic rational actor in economic theory, a point with clear implications for environmental policy.⁹ Taking seriously Professor Sunstein's suggestions on the use of disclosure requirements would produce environmentally positive impacts for industry and consumer choices.¹⁰

4. Harv. L. Sch., *Cass R. Sunstein*, <http://www.law.harvard.edu/faculty/directory/index.html?id=552> (accessed Nov. 22, 2008) [hereinafter *Sunstein*]; U. Chi. L. Sch., *Publications, Presentations, and Works in Progress*, <http://www.law.uchicago.edu/faculty/sunstein/ppw.html> (accessed Nov. 22, 2008) [hereinafter *Publications*].

5. *Sunstein*, *supra* n. 4; *Publications*, *supra* n. 4.

6. Daniel A. Farber, *Basic Compensation for Victims of Climate Change*, 155 U. Pa. L. Rev. 1605, 1605 (2007); Steven Ferrey, *Why Electricity Matters, Developing Nations Matter, and Asia Matters Most of All*, 15 N.Y.U. Envtl. L.J. 113, 113 (2007) ("Energy is the single most important problem facing humanity today.") (quoting Nobel Laureate, Richard Smalley).

7. For example, his latest book, *Nudge: Improving Decisions about Health, Wealth, and Happiness*, which he co-authored with Richard Thaler, is as entertaining as it is informative. Richard H. Thaler & Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (Yale U. Press 2008). The authors recommend "environmental nudges, helping to reduce air pollution (and the emission of greenhouse gases)." *Id.* at 6.

8. For a discussion on how consumer decision-making is influenced by a "nudge," see *id.* at 1–4.

9. In reconfiguring the inquiry on human action, Professor Sunstein compares "Humans and Econs":

Those who reject paternalism often claim that human beings do a terrific job of making choices, and if not terrific, certainly better than anyone else would do (especially if that someone else works for the government). Whether or not they have ever studied economics, many people seem at least implicitly committed to the idea of *homo economicus*, or economic man—the notion that each of us thinks and chooses unflinchingly well, and thus fits within the textbook picture of human beings offered by economists.

If you look at economics textbooks, you will learn that *homo economicus* can think like Albert Einstein, store as much memory as IBM's Big Blue, and exercise the willpower of Mahatma Gandhi. Really. But the folks that we know are not like that. Real people have trouble with long division if they don't have a calculator, sometimes forget their spouse's birthday, and have a hangover on New Year's Day. They are not *homo economicus*; they are *homo sapiens*. To keep our Latin usage to a minimum we will hereafter refer to these imaginary and real species as Econs and Humans.

Id. at 6–7.

10. Professor Sunstein and other scholars have been focusing on disclosure regarding environmental issues,

Moreover, his insights into the importance of framing policy issues have profound implications for government policy, particularly in the areas of environment and energy.¹¹ Professor Sunstein's writing provides insights into both the utility and the limits of cost-benefit analysis and reveals the uncertainties and indeterminacies in the cost-benefit analysis process. Moreover, Professor Sunstein's continuing focus on cost-benefit analysis makes his work a template for understanding and evaluating the place of cost-benefit analysis in the law.

Part II of this Article explores foundational principles of effective measurement and comparison, both from a general perspective and from the specific perspective of legal interests, suggesting that consistency is an irreducible minimum of cost-benefit analysis as well as other types of legal analysis. Part III considers cost-benefit analysis in regulatory and judicial decision-making and sets forth some of the scholarly critiques of the cost-benefit analysis process. Part IV focuses on lessons Professor Sunstein identifies regarding the use of the cost-benefit process in his article *Cost-Benefit Analysis without Analyzing Costs or Benefits: Reasonable Accommodation, Balancing, and Stigmatic Harms*.¹² In this article, Professor Sunstein celebrates Judge Richard Posner's contributions to the law¹³ and critiques Posner's application of cost-benefit analysis in the influential opinion *Vande Zande v. Wisconsin Department of Administration*.¹⁴ In the course of his critique, Professor Sunstein discusses the proper focus and framing of cost-benefit analysis under the Americans with Disabilities Act ("ADA") test for reasonable accommodation providing lessons of general applicability of cost-benefit analysis and emphasizing the importance of identifying the "real questions"¹⁵ attending any legal inquiry. Part V draws on Professor Sunstein's lessons, focusing on application of cost-benefit analysis to the most significant environmental issue of our time, global climate change, and treatment of this issue by Professors Sunstein and Posner in their article *Climate Change Justice*.¹⁶ Part VI concludes with some questions and observations about the utility and limitations on the use of cost-benefit analysis, particularly in the environmental area.

II. INCOMMENSURATE INTERESTS: OF APPLES AND SKYSCRAPERS

Recognition of the principle of consistent measurement appears in the common caution against comparing apples and oranges. When we assert that someone (generally an opponent) is comparing apples and oranges, we mean that the items being compared are incomparable. What do we mean by this well-known and often repeated exhortation against apples and oranges? It seems to say that useful comparisons are not possible without measurement. Likewise, comparison lacks validity absent a consistent yardstick.

including global climate change. E.g. Jeffrey A. Smith, Matthew Morreale & Michael E. Mariani, *Climate Change Disclosure: Moving towards a Brave New World*, 3 Cap. Mkts. L.J. 469, 471(2008) (noting that climate change disclosure fails to provide a basis for comparison of action since no universal standard for disclosure exists).

11. Thaler & Sunstein, *supra* n. 7, at 36–37.

12. 74 U. Chi. L. Rev. 1895 (2007).

13. *Id.*

14. 44 F.3d 538, 542–43 (7th Cir. 1995).

15. Sunstein, *supra* n. 12, at 1906.

16. 96 Geo. L.J. 1565 (2008).

The need for consistent measurement applies regardless of the character of the units of measurement and regardless of the nature of the attributes compared, so long as each is susceptible to a single measurement.

Nevertheless, a comparison of different things—such as apples and oranges—can be valid. Indeed, comparisons of different things such as apples and oranges can be fruitful as long as a consistent measurement can be found for making the comparison.¹⁷ Professor Sunstein's focus on the importance of framing issues, as well as common sense, elucidates the rule against comparing apples and oranges. The rule necessarily addresses the yardstick employed rather than the subject of the measurement. Measurements lack validity when the methods of comparison are incommensurate. But comparisons have validity when a common measure is possible. Thus, the scientist can validly compare apples and oranges—or apples and icebergs, apples and racecars, oranges and skyscrapers—by use of a consistent measuring device applied consistently to each item. Pounds or calories, inches or mass, moisture-content, color, sugar, radioactivity, and light absorption are all legitimate measures and provide the basis for valid comparisons when consistently applied. Science and law can compare any attribute so long as they can measure by a common yardstick.

The basic principles provide a starting place for measuring interests, as well as physical phenomena. The strength of the principle of consistent measurement, as applied to legal interests, is its obviousness: a level field, one yardstick, no thumbs on the scale.

An inevitable principle of measuring legal interests is that a common method of measure must apply to the interests in competition, absent a doctrine that prefers one party over the other. If one party's interests are measured by a subjective reckoning of his interest, then the yardstick of subjective measurement should also apply to a party injured by the exercise of his subjective interests. Professors Cooter and Ulen make this point in explaining Pareto efficiency by measuring the interests of parties by the same standard: "A particular situation is said to be *Pareto efficient* if it is impossible to change it so as to make at least one person better off (in his own estimation) without making another person worse off (again, in his own estimation)."¹⁸ It would be obviously unfair to elevate the values or preferences of one party over the other. Thus, a theory that adopts a subjective measure should apply a like-kind measure to all interests considered as part of its rationale, absent a valid reason for varying the measurement of the interests. Likewise, when one interest is measured by an objective standard, that same objective standard should apply to all competing interests absent a valid reason for differentiation.

The search for consistent measures must consider "collectives of people," including nations, as well as individuals, including consumers and corporate actors.¹⁹

17. Yes, the comparison can be fruitful.

18. Robert Cooter & Thomas Ulen, *Law and Economics* 12 (Andrea Shaw et al. eds., 3d ed., Addison Wesley Longman, Inc. 2000).

19. Posner & Sunstein, *supra* n. 16, at 1571. In *Climate Change Justice*, Professors Sunstein and Posner identify interests of nations, treating nations as individual actors for purposes such as economic interests in GNP, while rejecting the individual focus on a nation when considering issues of responsibility. *Id.* at 1568–74, 1583–86. This alternating focus presents a shift in measurement and treatment, considering unified benefits and costs for some purposes but emphasizing the collection of individuals within the nation for purposes of responsibility. *Id.* By contrast, environmental law incorporates a responsibility ethic for governmental entities, including the federal government. *Id.*

Analysis and treatment of people, in collectives or as individual actors, have particular significance in measuring interests and utility.²⁰ A measure of collective interests for purposes of measuring benefits should also apply a measure of collective interests for purposes of costs. As Professor Sunstein emphasized in his essay on Judge Posner's ADA analysis,²¹ the frame of a comparison is often determinative. Deciding which interests should be compared and finding the "real questions" to frame the comparison are essential to the outcome of any analysis.

Accuracy in measuring, whether by weight in a sale of goods or by metes and bounds in a sale of real estate, is essential, as with measuring devices and techniques in the law. Judicial opinions are filled with references to fair balances, weighing and balancing interests, equilibrium, and other metaphors for consistent measurement and consistent comparison.²² Such judicial metaphors can be problematic, however. Justice Scalia addressed the difficulty of measuring and balancing competing interests in *Bendix Autolite Corp. v. Midwesco Enterprises, Inc.*²³ He pointed out the futility of trying to balance incommensurate interests, using the mixed measures of length and weight:

Having evaluated the interests on both sides as roughly as this, the Court then proceeds to judge which is more important. This process is ordinarily called "balancing," . . . but the scale analogy is not really appropriate, since the interests on both sides are incommensurate. It is more like judging whether a particular line is longer than a particular rock is heavy.²⁴

Likewise, Professor Sunstein pointed to the problem of incommensurate interests in *Cost-Benefit Analysis without Analyzing Costs or Benefits*, noting that a "standard difficulty" of cost-benefit analysis is in neglecting to consider "costs and benefits that are not easily measured," such as costs that are "difficult to turn into monetary equivalents."²⁵ Justice Scalia's point brings home the fact that consistent measurement does not mean that all interests are of equal importance. Considerations of proportionality and the gravity of the interests at stake lead to a hierarchy of interests recognized by laws.²⁶ This is surely part of Shakespeare's point in constructing a contract that is nothing short of ghoulish.²⁷ Statutes often adjust the balance of interests. Taking such adjustments into consideration is a necessary step in interpreting a statute

20. Perhaps the most memorable exploration of rational action from the perspective of the collective versus individual action is found in Garrett Hardin, *The Tragedy of the Commons*, 162 *Sci.* 1243 (1968).

21. Sunstein, *supra* n. 12.

22. See e.g. *Natl. Treas. Employees Union v. Chertoff*, 385 F. Supp. 2d. 1, 29 (D.D.C. 2005) (calling new standards for collective bargaining "new metes and bounds for collective bargaining").

23. 486 U.S. 888, 897 (1988) (Scalia, J., concurring).

24. *Id.* (citation omitted)

25. Sunstein, *supra* n. 12, at 1903.

26. The strength of the social norm for protecting safety and physical integrity of members of society individually, as well as collectively, informs both common law and statutory law standards. Similarly, society's choice of punishment for the breach of criminal laws reflects the importance of the norm violated. Tort law and contract law present different damage formulas based on differing norms of protection and differing views of the culpability of the conduct sanctioned. Ordinarily the law will not provide punitive damages to punish a breach of contract. Punishment is available when a party commits a tort that the law regards as outrageous. The legal categories of criminal law, tort law, and contract law present a complex matrix of judgments regarding the strength of the interests at stake and the strength of social opprobrium for the breach of norms.

27. For a discussion of Shakespeare as it relates to cost-benefit analysis, see *supra*, n. 3.

and determining what role, if any, cost-benefit analysis should play in the application of the statute. For example, Professor Sunstein makes the point that the ADA requires a subjective standard on the issue of emotional harm and stigma.²⁸ He argues that the purposes and intent of the ADA justifies a subjective measure for the disabled.²⁹ This judgment results from assessing congressional intent in the ADA.³⁰

Economic and property interests ordinarily are not given the same weight as the interests in physical integrity, life, and liberty.³¹ Just as Shakespeare does in *The Merchant of Venice*, tort law accords greater weight to physical safety and bodily integrity than to economic rights. Tort law creates a system of incentives that encourages safe, rather than negligent practices, even though the negligent practices might be profitable to the actor absent the legal incentives at issue. Thus, the principle of consistent measurement is cabined within comparisons of competing interests. Traditionally, the law requires equal assessment and measurement of competing interests within a category, such as economic or financial interests,³² and mandates a conscious ranking of the strength of the interests at issue. Identifying an appropriate measure for a particular loss also involves judgments about the grievousness of the loss and the *ex ante* value of the thing lost.

Getting the analysis right is no easy task under any system. Success in analysis necessarily involves a judgment of what interests are accorded greater weight. As Justice Scalia points out, courts judge “which [interest] is more important.”³³ As the regulatory state has evolved, courts defer to agencies, and regulators rely on cost-benefit analysis. Nevertheless, cost-benefit analysis is not universally embraced as the methodology to answer (or ask) the right questions. Legislation sometimes requires its use and sometimes bars or restricts its use, and scholars call for further scrutiny of the process.

III. MEASURING COST-BENEFIT ANALYSIS

Although questions about measuring and ranking interests predate Shakespeare, the debate is by no means settled. Increased risks to human life and public health in today’s world have heightened concerns about systems ranking risks. Cost-benefit analysis has arisen as a way for judges and agencies to attempt to measure legal interests and assess regulatory strategies. Cost-benefit analysis holds appeal as a way of making informed and reasonable decisions. Any method that disciplines intuitions and

28. Sunstein, *supra* n. 12, at 1902 (commenting that “Judge Posner was willing to ‘assume without having to decide’ that emotional barriers to full integration into the workplace ‘are relevant.’ (If we are engaged in cost-benefit analysis, why assume without deciding? It seems clear that emotional barriers are real costs, and potentially high ones.) But here, he concluded that separate but equal was unobjectionable—even if it was not quite equal.”) (footnote omitted).

29. *Id.*

30. The Act does not include a measure of emotional issues for the employer. Considerations of emotional harm and stigma of the employer are not within the purposes of the ADA.

31. See generally Irma S. Russell, *The Logic of Legal Remedies and the Relative Weight of Norms: Assessing the Public Interest in the Tort Reform Debate*, 39 Akron L. Rev. 1053 (2006).

32. See *United Haulers Assn., Inc. v. Oneida-Herkimer Solid Waste Mgt. Auth.*, 550 U.S. 330 (2007); *Gen. Motors Corp. v. Tracy*, 519 U.S. 278 (1996).

33. *Dept. of Revenue of Ky. v. Davis*, 128 Sup. Ct. 1801, 1821 (2008) (Scalia, J., concurring).

prejudices through a rigorous system of comparison of interests has strong appeal. Such a system seems to offer profound advantages over conclusory judgments or simple syllogistic reasoning. Whether the use of cost-benefit analysis lessens undesirable indeterminacy in decision-making or achieves greater clarity in policy and judicial decisions remains unclear, however.

The growing reliance on cost-benefit analysis in judicial decision-making, agency regulations, and scholarly analysis enhances the impact of cost-benefit analysis, resulting in heightened competition in the calculus of economics versus lives in ways Shakespeare could not have imagined.³⁴ The use of cost-benefit analysis in the law is the topic of Judge Posner's recently published book *How Judges Think*.³⁵ In this work, Judge Posner points to the use of economics (including cost-benefit analysis) for improved judicial decision making. "The most important theory that is not limited to constitutional law, though it embraces it, is economics."³⁶ Judge Posner reviews theories of judicial decision making. Judge Posner's approach rests in large part on a belief that the indeterminacy of the current method of reaching decisions leaves judges free to apply their own personal value systems in ways that are not beneficial to the legal system or to the litigants whose disputes are subject to judicial resolution.³⁷ Asserting that sociological, economic, organizational, pragmatic, legalistic, and policy choice approaches³⁸ fail to explain judicial behavior, Judge Posner asserts that unconscious preconceptions and intuitions play a significant role in judicial decisions. Rejecting other theories of judging, Judge Posner asserts that legal issues "can be answered with a fair degree of objectivity by judges armed with basic economic skills and insights,"³⁹ Judge Posner recommends an approach based on pragmatic adjudication.⁴⁰ He asserts that "economic analysis has helped move judges from reliance on instinct and semantics to something closer to cost-benefit analysis."⁴¹ Recognition of problems in measuring and comparing incommensurate interests, limitations on the utility of cost-benefit analysis, and the necessarily provisional nature of policy analysis have great significance in environmental policy. The claim is that cost-benefit analysis results in better decisions in the sense that the decisions are less susceptible to personal values of the judge or other decision maker.

In difficult cases, which are so mainly because they are cases in which the orthodox materials of legal decision-making cannot produce a satisfactory decision (sometimes cannot produce a decision, period), judges are perforce reliant on other

34. See Charlie Savage, *Appeals Courts Pushed to Right by Bush Choices*, 158 N.Y. Times 1A (Oct. 29, 2008) (reporting that President Bush's appointment of younger conservative judges transformed federal appeals courts and including rhetoric conservative judges provided "neutral application of the law").

35. Richard A. Posner, *How Judges Think* (Harv. U. Press 2008).

36. *Id.* at 237.

37. *Id.* at 107.

38. *Id.* at 19.

39. *Id.* at 77.

40. Posner, *supra* n. 35, at 238 (asserting that "[t]he 'significance of economics for the study of judicial behavior lies mainly in the consilience of economics with pragmatism,' and that "[t]he economist, like the pragmatist, is interested in ferreting out practical consequences rather than engaging in a logical or semantic analysis of legal doctrines." (footnote omitted)).

41. *Id.* at 212.

sources for their decision. They must find something to move them off dead center, and the modern law professor can help them in their quest. In a number of areas of law, economic analysis has helped move judges from reliance on instinct and semantics to something closer to cost-benefit analysis. This has produced a gain in precision and concreteness that should actually warm a legalist's heart because it reduces the area in which judges make decisions in a fog of emotion and undisciplined intuition.⁴²

A review of the scholarship of the area reveals diversity regarding the scope and framework of cost-benefit analysis, raising questions about whether indeterminacy is decreased by the use of this analytical frame. Cost-benefit analysis has received growing critical attention in recent years. Critics charge inaccuracy and bias,⁴³ lack of transparency, lack of reliability,⁴⁴ and inadequate monetizing of benefits, meaning that fairly complete cost estimates are often balanced against inadequate estimates of benefits.⁴⁵ As we will see from Professor Sunstein's evaluation of Judge Posner's application of cost-benefit analysis, however, cost-benefit analysis can be as susceptible to furthering prejudices as it is to disciplining them. He notes that, "as practiced within the judiciary, cost-benefit analysis . . . can operate as a vessel for unreliable intuitions rather than a way of disciplining them . . ."⁴⁶ This point suggests a need for better understanding of cost-benefit analysis.

It should also be noted that the process of cost-benefit analysis itself is not costless. One way to justify the system of analysis would be to require that the cost-benefit analysis process itself pass a stringent cost-benefit analysis before it is applied in a given area. Do the benefits of using the system outweigh its costs? As with many issues in the law, the contest between two approaches has a burden of proof aspect. Is the utility of cost-benefit analysis sufficiently justified under its own rubric in the case at hand? The tendency of this method is delay and paralysis, and the possible result is that legislative mandate is reduced to symbolism rather than effective regulation.

Skeptics point out . . . that regulated companies are generally better organized and can devote more resources to preparing and critiquing cost-benefit analyses than public interest groups arguing in favor of greater governmental protections. They maintain that the very process of preparing the analyses acts as a drag on the implementation of protective

42. *Id.* at 211–12.

43. Sidney A. Shapiro & Christopher H. Schroeder, *Beyond Cost-Benefit Analysis: A Pragmatic Reorientation*, 32 Harv. Envtl. L. Rev. 433, 457–58 (2008) (asserting that cost-benefit analysis results "are often biased by the analyst's policy preferences or the value judgments that are implicit in rational choice methodologies" with opponents to regulations presenting "benefit estimates that are far lower than the agency's estimates or those of pro-regulatory sources." (footnote omitted)).

44. Thomas McGarity states:

The cost estimates have in the past proven notoriously unreliable, because they have often relied heavily upon information provided by regulated entities that have an obvious stake in the outcome of the proceedings. Even cost assessments from unbiased sources are rarely accurate to within one or two orders of magnitude. The risk estimates that underlie these calculations can vary over five to ten orders of magnitude, depending upon the models selected and the exposure assumptions that are plugged into those models.

Thomas O. McGarity, *A Cost-Benefit State*, 50 Admin. L. Rev. 7, 52–53 (1998) (footnotes omitted).

45. Shapiro & Schroeder, *supra* n. 43, at 454 (noting "that estimates often end up monetizing only some benefits of a health or environmental regulation because of the inability to monetize all of the risks it reduces").

46. Sunstein, *supra* n. 12, at 1896.

programs.⁴⁷

Significant criticism has been leveled against cost-benefit analysis on numerous grounds, including assertions that it “smuggles” in considerations of efficiency despite a statute’s rejection of efficiency in a particular context,⁴⁸ and it fails to consider non-economic values sufficiently.⁴⁹ In *Beyond Cost-Benefit Analysis: A Pragmatic Reorientation*, Professors Sidney A. Shapiro and Christopher H. Schroeder review some of the problems associated with cost-benefit analysis.

As a means to improve agency transparency and accountability, CBA has serious flaws. Most of the elements of CBA—the cost data that goes into the analysis, the conclusions that are extracted from risk information through the “weight of the evidence” approach that agencies follow, the selection of models required at various stages of the quantitative risk assessment process, the assumptions necessary to build the inferential bridges that must be crossed when there are gaps in the data—are all subject to manipulation, whether by interested parties with sufficient resources to do so or by agencies pursuing their own agendas.⁵⁰

Some scholars see cost-benefit analysis as a means of devaluing health and environmental protections passed by Congress, allowing regulators to muffle or trump the law through regulation.

Congress enacted most health and environmental laws to protect some members of the public from the harmful aspects of conduct engaged in by other members of the public. Many beneficiaries of these laws believe that cost-benefit proponents are biased against the protective approaches that Congress adopted in existing protective legislation. Given the difficulty in quantifying benefits, they challenge the presumption that nothing should be done to protect the health and the environment until the government can meet the affirmative burden of demonstrating that the benefits of a particular initiative will outweigh the costs.⁵¹

Others charge that the use of cost-benefit analysis in the regulatory realm minimizes public influence.

Cost-benefit analysis is a complex, resource-intensive, and expert-driven process. It requires a great deal of time and effort to attempt to unpack even the simplest cost-benefit analysis. Few community groups, for example, have access to the kind of scientific and technical expertise that would allow them to evaluate whether, intentionally or unintentionally, the authors of a cost-benefit analysis have unfairly slighted the interests of

47. McGarity, *supra* n. 44, at 57 (footnote omitted).

48. Shapiro & Schroeder, *supra* n. 43, at 461 (noting that in some cases “[t]he White House may insist that agencies adjust their regulatory policies based on the results of an RIA, and if this occurs, the value of ‘efficiency’ is smuggled into decisionmaking even if a statute rejects economic efficiency as a value that should determine the level of regulation.” (footnote omitted)).

49. See e.g. *Lead Indus. Assn., Inc. v. EPA*, 647 F.2d 1130, 1150–53 (D.C. Cir. 1980) (holding that the EPA was not authorized to consider economic or technological feasibility in setting air quality standards); see also Thomas O. McGarity, *Professor Sunstein’s Fuzzy Math*, 90 Geo. L.J. 2341, 2343 (2002) (citing cost-benefit analysis as the reason the EPA has not limited exposure to toxic chemicals under TSCA and noting the huge uncertainties that accompany attempts to quantify and compare costs and benefits of health, safety, and environmental regulation); see generally Sidney A. Shapiro & Rena Steinzor, *Capture, Accountability, and Regulatory Metrics*, 86 Tex. L. Rev. 1741 (2008).

50. Shapiro & Schroeder, *supra* n. 43, at 495.

51. McGarity, *supra* n. 44, at 56 (footnotes omitted).

the community or some of its members. Few members of the public can participate meaningfully in the debates about the use of particular regression analyses or discount rates which are central to the cost-benefit method.⁵²

The issue of measurement is of great significance in this debate. Both cost and risk assessments “rely heavily on mathematical models of reality,” with the result that “assumptions and inferences that fill the factual gaps depend as much on policy as upon economic judgment. The end result is that cost assessments are also highly uncertain and policy-dependent.”⁵³ Professor Thomas O. McGarity examined the problem of incommensurate measures in *A Cost-Benefit State*:

[Q]uantitative cost-benefit analysis requires the analyst to reduce costs and benefits to a common metric to facilitate comparisons. Since costs are usually expressed in dollars, analysts typically attempt to translate risk assessments into benefits assessments by assigning dollar values to reduced risks to health and the environment. . . . [A]ssigning dollar values to human health and important environmental entities is quite controversial, and there is little agreement among educated observers as to how, or even whether, it should be undertaken.⁵⁴

As Professor McGarity argues, strong reasons exist for opposing prospective valuing of life.

Some especially ambitious advocates of risk-based priority setting would combine quantitative risk assessment and cost analyses to arrive at a numerical cost-per-life-saved for potential rulemaking initiatives.

The cost estimates have in the past proven notoriously unreliable, because they have often relied heavily upon information provided by regulated entities that have an obvious stake in the outcome of the proceedings. Even cost assessments from unbiased sources are rarely accurate to within one or two orders of magnitude.⁵⁵

In *Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection*, Frank Ackerman and Lisa Heinzerling point to fundamental flaws in such costing out of lives, by stating that “cost-benefit analysis involves the creation of artificial markets for things—like good health, long life, and clean air—that are not bought and sold. It also involves the devaluation of future events through discounting.”⁵⁶ The question of valuing life comes into play both as a stand-alone issue and as a criticism of the use of cost-benefit analysis. Some statements of the issues are reminiscent of Shakespeare’s articulation in *The Merchant of Venice*.⁵⁷

Human life is the ultimate example of a value that is not a commodity and does not have a price. You cannot buy the right to kill someone for \$6.3 million, nor for any other price. Most systems of ethical and religious belief maintain that every life is sacred. If

52. Frank Ackerman & Lisa Heinzerling, *Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection*, 150 U. Pa. L. Rev. 1553, 1577–78 (2002).

53. McGarity, *supra* n. 44, at 15–16 (footnote omitted).

54. *Id.* at 16 (footnote omitted).

55. *Id.* at 50, 52–53 (footnote omitted).

56. Ackerman & Heinzerling, *supra* n. 52, at 1562.

57. See *supra* n. 3, for a discussion of *The Merchant of Venice*.

analysts calculated the value of life itself by asking people what it is worth to them (the most common method of valuation of other environmental benefits), the answer would be infinite, as “no finite amount of money could compensate a person for the loss of his life, simply because money is no good to him when he is dead.”⁵⁸

The question of valuing life provides a dramatic example of mixed measures. Such actions involve measuring the economic value of the lives of particular people. Just as jurors set a price on a life in a wrongful death action as an economic matter, Hobbes argued for an external and objective price for valuing a particular person’s life. The defendant who has caused this loss of life through negligence or wrongdoing receives the benefit of an objective standard of valuing. The valuing in the tort context is necessary because the life is already lost. The problem in the regulatory sphere is that valuing hypothetical lives creates the artificial market that Professors Ackerman and Heinzerling criticize in *Pricing the Priceless*. Moreover, the incentives of the law do not end at this point. Punitive damages insert intentional uncertainty into the formula with the result that the price set does not create a market value to measure lives prospectively. As a practical matter, the uncertainty of punitive damages serves as a hedge against gross negligence or intentional actions that would result in future deaths.⁵⁹ The cost-benefit analysis approach of regulatory policy, on the other hand, values lives of hypothetical victims, using a standardized measure of the value of these lives. Even setting aside moral aspects of the question of valuing life fails to yield an easy analysis.⁶⁰ The incommensurate monetizing of lives prospectively is the center of the dispute.⁶¹ While the proponents of cost-benefit analysis believe that it is the only rational system of weighing the pros and cons of policy proposals, other scholars disagree.⁶²

The place to begin a consideration of cost-benefit analysis in any given question is the particular law or legal doctrine at issue. While some laws explicitly require cost-benefit analysis,⁶³ others prohibit its use.⁶⁴ A wide area of discretionary judgment on

58. Ackerman & Heinzerling, *supra* n. 52, at 1564 (footnote omitted).

59. See Tracy A. Thomas, *Proportionality and the Supreme Court’s Jurisprudence of Remedies*, 99 *Hastings L.J.* 73, 116–17 (2007).

60. Thomas Hobbes provided a dispassionate look at this debate.

The *Value*, or WORTH of a man, is as of all other things, his Price; that is to say, so much as would be given for the use of his Power: and therefore is not absolute; but a thing dependant on the need and judgement of another. An able conductor of Souldiers, is of great Price in time of War present, or imminent; but in Peace not so. A learned and uncorrupt Judge, is much Worth in time of Peace; but not so much in War. And as in other things, so in men, not the seller, but the buyer determines the Price. For let a man (as most men do,) rate themselves at the highest Value they can; yet their true Value is no more than it is esteemed by others.

Thomas Hobbes, *Leviathan* 63 (Richard Tuck ed., Cambridge U. Press 1991).

61. See Shapiro & Schroeder, *supra* n. 43, at 454.

62. See e.g. Shapiro & Schroeder, *supra* n. 43.

63. E.g. *N.M. Cattle Growers Assn. v. U.S. Fish & Wildlife Serv.*, 248 F.3d 1277, 1285 (10th Cir. 2001) (holding the Endangered Species Act required Fish & Wildlife Service to “conduct a full analysis of all of the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable co-extensively to other causes”).

64. The Endangered Species Act provides a memorable example of a statute that rejects cost-benefit analysis in the environmental sphere. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 154, 194–95 (1978) (finding that the legislative history clearly revealed that in enacting Section 7 of the Endangered Species Act, “Congress intended to halt and reverse the trend toward species extinction—whatever the cost,” and stating that “[o]ur individual appraisal of the wisdom or unwisdom of a particular course consciously selected by the Congress is

the use of the methodology exists in application of common law and statutory law. Thus, difficult questions exist regarding when to incorporate cost-benefit analysis in applying a statute or common law doctrine in the situation of silence on the issue of balancing interests.

Explicit empirical and theoretical study of the parameters and effects of the use of cost-benefit analysis deserves attention before the wide area of discretionary use of cost-benefit analysis should be implemented. Taking the purpose of the statute into consideration is a necessary first step in interpreting the reach of the statute and the role for cost-benefit analysis—as Professor Sunstein notes in *Cost-Benefit Analysis without Analyzing Costs or Benefits*.⁶⁵ For example, in *Tennessee Valley Authority v. Hill*,⁶⁶ the Supreme Court noted that the role of the court is not to evaluate the wisdom of laws but to apply the judgments of the legislature consistent with legitimate policies.⁶⁷

One might . . . say[] that in this case the burden on the public through the loss of millions of unrecoverable dollars would greatly outweigh the loss of the snail darter. But neither the Endangered Species Act nor Art. III of the Constitution provides federal courts with authority to make such fine utilitarian calculations. On the contrary, the plain language of the Act, buttressed by its legislative history, shows clearly that Congress viewed the value of endangered species as “incalculable.” Quite obviously, it would be difficult for a court to balance the loss of a sum certain—even \$100 million—against a congressionally declared “incalculable” value, even assuming we had the power to engage in such a weighing process, which we emphatically do not.⁶⁸

Similarly, in *Lead Industrial Assn. v. EPA*,⁶⁹ the D.C. Circuit rejected the argument that the EPA should consider a cost-benefit analysis in setting air quality standards under the Clean Air Act, noting that “the statute and its legislative history make clear that economic considerations play no part in the promulgation of ambient air quality standards under Section 109 [of the Clean Air Act].”⁷⁰

By contrast, the National Environmental Policy Act (NEPA) requires that agencies consider cost and benefits of federal projects, including environmental costs and benefits. NEPA does not require a monetized cost-benefit analysis, however. It is the monetizing of life that is most troubling to scholars critical of cost-benefit analysis. Unlike Section 7 of the Endangered Species Act or the Clean Air Act, NEPA does not require that environmental values trump economic values. The Supreme Court has interpreted the Act as procedural rather than substantive, meaning that while agencies must consider the costs and benefits of a project, the Act does not require that the agencies adopt the most cost effective project.⁷¹ The regulations that implement NEPA requirements indicate

to be put aside in the process of interpreting a statute. Once the meaning of an enactment is discerned and its constitutionality determined, the judicial process comes to an end. We do not sit as a committee of review, nor are we vested with the power of veto.”)

65. Sunstein, *supra* n. 12, at 1898–99.

66. 437 U.S. 153.

67. *Id.* at 187–88.

68. *Id.* (footnote omitted).

69. 647 F.2d 1130.

70. *Id.* at 1148 (finding “totally without merit” the argument that promulgation of ambient air quality standards for lead should consider economic or technological feasibility in setting the air quality standards).

71. *Vt. Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 541 (1978).

that cost-benefit analysis can be used in agency considerations under NEPA.⁷² Nevertheless, because NEPA has been determined to set procedural rather than substantive requirements, a negative cost-benefit analysis would not necessarily mean that an agency studying a project would necessarily abandon the project.⁷³

Few statutes require a monetized cost-benefit analysis. In *Risk Regulation at Risk*, Professors Sidney A. Shapiro and Robert L. Glicksman find that “[o]nly two of the twenty-two” major health, safety and environmental statutes relied on a cost-benefit test as the statutory standard.⁷⁴ Even in cases where it is clear that cost-benefit analysis is allowed or required in a particular legal inquiry, the scope and angle of the analysis is often open to different interpretations, just as statutes are open to interpretation under the traditional interpretation. In fact, a prudential balancing that is available for non-monetized costs and benefits often fulfills the statutory goals. While this point is not particularly surprising, it raises questions about claims that cost-benefit analysis is a dependably useful process in judicial or agency decision making. Difficult questions exist relating to the place of cost-benefit analysis in our jurisprudence. Nevertheless, some points relating to the issue are clear. Laws sometimes require and sometimes restrict the use of the tool of cost-benefit analysis. Judges abide by statutory and case law restrictions in determining not only the reach and purpose of the law but also in determining the role for cost-benefit analysis. As is frequently the case in law, the debate exists in the silence, the part of the statute or law left to judicial or agency discretion. Courts use judgment regarding decisions in this lacuna. The bookends of decision are clear: When the law requires cost-benefit analysis, judges must apply it, but when it prohibits such analysis, courts must refrain from it. The debate on cost-benefit analysis focuses on this area of discretion. The area is broad and the debate channels long-standing conceptions about the role of law, as well as different conceptions of the best use of the law as a means of protecting the public or facilitating economic enterprise.

IV. PROFESSOR SUNSTEIN’S COST-BENEFIT LESSONS: ASKING THE REAL QUESTIONS

In *Cost-Benefit Analysis without Analyzing Costs or Benefits: Reasonable Accommodation, Balancing, and Stigmatic Harms*, Professor Sunstein suggested lessons for the application of cost-benefit analysis.⁷⁵ He emphasized the importance of identifying the “real questions” in comparing costs and benefits and interests, and shared principles of his view of cost-benefit analysis.⁷⁶ Professor Sunstein argued that the

72. 40 C.F.R. § 1502.23 (2008). The regulation states that “[i]f a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by reference or appended to the statement as an aid in evaluating the environmental consequences.” *Id.*

73. See *Strycker’s Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980) (holding that “once an agency has made a decision subject to NEPA’s procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences”).

74. Sidney A. Shapiro & Robert L. Glicksman, *Risk Regulation at Risk: Restoring a Pragmatic Approach* 40 (Stan. L. & Pol. 2003).

75. Sunstein, *supra* n. 12.

76. *Id.* at 1895 (criticizing Judge Posner’s analysis for failing to “seriously investigate either costs or benefits”).

requirement of reasonable accommodation under the ADA should include emotional harm and stigma to the disabled employee.⁷⁷ In *Vande Zande v Wisconsin Department of Administration*,⁷⁸ Judge Posner dealt with the reasonable accommodation requirement of the ADA. While Professor Sunstein agreed with Judge Posner's view that the "reasonable accommodation" mandate of the ADA requires application of a cost-benefit analysis, he found the judge's decision failed to fully accomplish this purpose.⁷⁹

In his article, Professor Sunstein demonstrates the central role of the law in measuring and comparing interests. The underlying premise of Sunstein's argument is that comparisons of legal interests is crucial to legal judgments.⁸⁰ As the title of the piece suggests, Professor Sunstein concludes that Judge Posner failed to assess costs and benefits sufficiently: "In the very case in which Judge Posner established that a kind of cost-benefit analysis lies at the heart of the requirement of reasonable accommodation, he did not analyze costs and benefits, and he certainly made no systematic effort to compare the two."⁸¹

Part of the message of the article involved a challenge to the conventional wisdom that cost-benefit analysis offers a means of making decisions that are less susceptible to indeterminacy and value judgments.

The plaintiff in *Vande Zande* was paralyzed from the waist down.⁸² She requested that the employer lower a sink in the kitchenette in her work place so that she could reach it from her wheelchair. The cost to lower the sink on the floor where plaintiff worked was approximately \$150. The cost to lower the sinks throughout the building was approximately \$2,000. Plaintiff also sought an accommodation to allow her to work at her home when pressure ulcers made it impossible for her to work at the office.⁸³ After agreeing with Judge Posner that the "reasonable accommodation" standard of the ADA requires cost-benefit analysis,⁸⁴ Sunstein noted that his analysis departed from that of Judge Posner on the question of what is an undue hardship on an employer who is asked to provide an accommodation, stating that while the burden might be considered "in the abstract,"⁸⁵ it might also be viewed "in relationship to the benefits of the accommodation."⁸⁶ Professor Sunstein identified the real question under this approach as "whether the requested accommodation would be well-tailored to the disability in question."⁸⁷ He faulted Judge Posner's decision for failing to spend sufficient time considering the "text, history, or structure of the ADA" and for failing to "carefully

77. *Id.*

78. 44 F.3d 538.

79. Sunstein, *supra* n. 12, at 1895 (stating that "[t]he problem with Judge Posner's analysis is that it does not seriously investigate either costs or benefits").

80. *Id.* at 1900 (explaining that "it would seem quite odd to say that an accommodation will be deemed 'reasonable' only if an employee is willing to pay an amount that exceeds, or is at least proportional to, the costs incurred by the employer").

81. *Id.* at 1905.

82. 44 F.3d at 543.

83. *Id.* at 543-46.

84. Sunstein, *supra* n. 12, at 1901.

85. *Id.* at 1898.

86. *Id.* (citing *Vande Zande*, 44 F.3d at 543).

87. *Id.* at 1898.

analyze the conventional sources of interpretation” to determine the proper application of the statute.⁸⁸ He also questioned whether it is “clear that the statutory term ‘reasonable,’ in the context of a ban on disability discrimination, should be taken in the same way as the concept in tort law.”⁸⁹

Discussing the important virtues and vices of cost-benefit analysis, Professor Sunstein noted that finding “[t]he proper measurement of those costs poses serious challenges.”⁹⁰ Professor Sunstein notes benefits and risks inherent in the cost-benefit analysis process in the context of the ADA:

As we shall see, cost-benefit balancing has some important virtues It helps to expose the fact that a failure to accommodate a disabled person may stem from habit or prejudice; it properly focuses attention on the issue of potential benefits to the disabled person and potential costs to the employer; and it disciplines intuitions that may be insufficiently anchored in reality. But at least as practiced within the judiciary, cost-benefit analysis also has potential vices. It can operate as a vessel for unreliable intuitions rather than a way of disciplining them, and it can fail to take account of an important aspect of discrimination, consisting of the daily humiliations of exclusion and stigmatization.⁹¹

Sunstein’s evaluation of Judge Posner’s decision depends on a judgment regarding what “is “sensible to think that a hardship on the employer”⁹² and whether it is to be judged to be due or “‘undue’ . . . in the abstract” or “in relationship to the benefits of the accommodation.”⁹³ Professor Sunstein’s point applies to the cost-benefit analysis process generally. Clearly, the methodology of cost-benefit analysis is subject to considerable range. The process leaves open the scope and comparison of the analysis. “A standard difficulty with cost-benefit analysis is that it may neglect costs and benefits that are not easily measured. The emotional barriers to full integration are certainly difficult to turn into monetary equivalents, or otherwise to use for purposes of formal or informal cost-benefit analysis.”⁹⁴

Professor Sunstein’s analysis reveals that cost-benefit analysis is far from value free. The judge or regulator applying it must determine what factors to measure, weigh, and compare in the given legal context. Professor Sunstein questioned Judge Posner’s ruling in *Vande Zande* that it was unreasonable (not a “reasonable accommodation” under the ADA) to require the lowering of the kitchenette sink to accommodate the plaintiff’s access to her workplace.⁹⁵ Professor Sunstein also questioned Judge Posner’s rejection of the plaintiff’s claim for 16.5 hours of sick leave taken as a result of the employer’s failure to provide an at-home computer, which would have enabled her to work 16.5 hours from home.⁹⁶ Professor Sunstein argued that Judge Posner failed to fully recognize and value the emotional barriers to full integration of disabled workers in

88. *Id.* at 1898–99.

89. Sunstein, *supra* n. 12, at 1899.

90. *Id.* at 1896.

91. *Id.*

92. *Id.* at 1898.

93. *Id.* (footnote omitted).

94. Sunstein, *supra* n. 12, at 1903 (footnote omitted).

95. *Id.* at 1902–04.

96. *Id.* at 1904–05.

the workplace, asserting that “stigmatic harms and daily humiliations deserve serious attention as part of the inquiry into whether requested accommodations are reasonable”⁹⁷ Professor Sunstein argued for “the importance of seeing those daily humiliations as imposing significant costs,” because failing to consider such costs “does a real disservice both to cost-benefit analysis and to the ADA.”⁹⁸ Accordingly, he notes that “the removal of those harms and humiliations can create real benefits.”⁹⁹ He concluded that the cost-benefit process in this context “must attempt to measure and include those benefits.”¹⁰⁰ He identified the “real question” of the case under the ADA by his view of the underlying goals of the ADA.¹⁰¹ Certainly, finding the real questions is fundamental to effectuating the goals of law in any given circumstance. It is also fundamental to understanding the role of judges, legislators, and regulators in facing the important task of identifying the “real question” in other areas, especially those with significant impact on public health and safety.

Noting the “[p]uzzles and [v]aluations” involved in the hard work of applying the law, Sunstein raises numerous questions about whether benefits of accommodation must “be turned into monetary equivalents” and whether such monetary figures should be based on “willingness to pay.”¹⁰² He asks the “even more puzzling question” of the monetary value of not receiving the accommodation from the view of the disabled person.¹⁰³ Professor Sunstein notes the oddness of deeming an accommodation “‘reasonable’ only if an employee is willing to pay an amount that exceeds, or is at least proportional to, the costs incurred by the employer.”¹⁰⁴ He charges Judge Posner with failing to address these important questions¹⁰⁵ and asserts that “emotional as well as material harm” to the plaintiff should be included in the issue of reasonable accommodations test because including these harms “would provide some discipline on the inclination to trivialize, or alternatively to exaggerate, the emotional or stigmatic harm of failures to accommodate.”¹⁰⁶

Cost-benefit analysis cannot easily take [stigmatic] harms on board. But there is no question that those harms greatly matter. People may be willing to pay a great deal to avoid them, or demand a great deal not to be subjected to them. . . . It is plausible to say that what most matters is welfare, not willingness to pay, and the willingness to pay of disabled workers may not give a sufficient account of the welfare effects of stigma and humiliation. There is no question that an adequate analysis of costs and benefits would count expressive and symbolic harms, because their welfare effects are real and sometimes large.¹⁰⁷

Here, Professor Sunstein’s recognition of the “standard difficulty” in cost-benefit

97. *Id.* at 1895.

98. *Id.* at 1896.

99. Sunstein, *supra* n. 12, at 1895.

100. *Id.*

101. *Id.* at 1898–99.

102. *Id.* at 1899 (footnote omitted).

103. *Id.*

104. Sunstein, *supra* n. 12, at 1900.

105. *Id.*

106. *Id.* at 1903.

107. *Id.* at 1909.

analysis of neglecting “costs and benefits that are not easily measured”¹⁰⁸ is similar to that of scholars critical of cost-benefit analysis such as Professor McGarity who documents the problem of “conflat[ing] information and values that cannot easily be incorporated into the benefit analyses.”¹⁰⁹

Professor Sunstein objects to Judge Posner’s ruling that an employer does not have “a duty to expend even modest amounts of money to bring about an absolute identity in working conditions between disabled and nondisabled workers,” calling it “a conclusion, not an argument.”¹¹⁰ He criticized Judge Posner’s move to assume rather than to decide the cost of “emotional barriers to full integration into the workplace,”¹¹¹ and he argues that courts should assess fully the real costs of inconvenience and humiliation.¹¹²

With respect to the lowering of the sink, Vande Zande had two concerns. The first was practical. If the goal is to wash a coffee cup, or to get a drink of water, it is probably most pleasant and convenient to be able to use a kitchenette, not the bathroom. The second involved stigma. If most people are able to use the sink in the kitchenette, it is not merely convenient to be able to use that sink; worse, it is stigmatizing and in a way humiliating to have to use the bathroom instead.¹¹³

Professor Sunstein concluded that Judge Posner’s failure to fully assess the costs to the plaintiff trivialized her interests.

Judge Posner trivialized these concerns. But for an employee, the use of the sink, in the kitchenette on her or his floor, may be a matter of daily routine, and it is no light thing to have to resort to the place in which employees generally do other sorts of things (not to put too fine a point on it). To this extent, the harm in *Vande Zande* was expressive and symbolic.¹¹⁴

Professor Sunstein notes the broader implications of the questions he raises. “The broader point is that even if measurement is difficult, a failure to consider that harm is not defensible.”¹¹⁵ Moreover, he notes that a “standard difficulty” in cost-benefit analysis is that it may neglect factors “not easily measured,” including “[t]he emotional barriers to full integration” in society.¹¹⁶

Professor Sunstein charged Judge Posner (the father of the economics in law movement) with “casual empiricism” and with failing to “seriously ask the questions that, on his view, the statute required.”¹¹⁷ Thus, Professor Sunstein does not blink at the difficulties involved in cost-benefit analysis. “[C]ost-benefit analysis might incorporate

108. *Id.* at 1903 (footnote omitted).

109. McGarity, *supra* n. 44, at 58 (footnote omitted) (noting that “[w]hen information or values arise that cannot easily be factored into the benefit models, the modelers often simply ignore them. In this way, modelers tend to ‘dwarf soft variables’ like emotional distress and concern for the well-being of endangered species.”) (footnote omitted).

110. Sunstein, *supra* n. 12, at 1902 (footnote omitted).

111. *Id.*

112. *See id.*

113. *Id.* at 1908.

114. *Id.* at 1908–09.

115. *Id.* at 1903–04 (footnote omitted).

116. Sunstein, *supra* n. 12, at 1903 (footnote omitted).

117. *Id.* at 1905.

intuitions rather than disciplining them. Without a method for calculating costs or benefits, analysts are likely to rely on their own hunches and speculations.”¹¹⁸

Among the lessons Sunstein drew from his review of the case included the “need to know much more about how juries handle questions submitted to them under the ADA.”¹¹⁹ He notes that “Judge Posner calls for a rough proportionality test” rather than a true cost-benefit analysis.¹²⁰

A signal virtue of some kind of weighing of costs and benefits is that it can demonstrate that erroneous intuitions, or hostility and prejudice, are beneath the surface. How much of a burden would have been imposed by eight weeks of telecommuting? Why not lower sinks to thirty-four inches, so that they can be used by people with wheelchairs—especially if the cost is usually around \$150? An advantage of an inquiry into costs and benefits, and of a comparison of the two, is that it makes it possible to test intuitions, and practices, by reference to reality.¹²¹

Professor Sunstein concluded that Judge Posner’s analysis in the *Vande Zande* case on the issue of working at home by telecommuting as an accommodation under the ADA was “brisk, conclusory, and inadequate.”¹²² He found the judge’s treatment of the accommodation of lowering one or more sinks to be “brief, conclusory, and quite unconvincing.”¹²³ In considering the “puzzle” of the judge’s failure to be “more systematic,” Professor Sunstein speculates that two problems may lead to such a result.¹²⁴ First, he notes that cost-benefit analysis may sometimes “incorporate intuitions rather than disciplining them,”¹²⁵ leading to “hunches and speculations,”¹²⁶ which “may be a product of some kind of prejudice, . . . not of bigotry, but of an insufficiently reflective belief that standard workplace practices . . . are entirely reasonable.”¹²⁷ In the case of insufficient information, judicial hunches, and intuitions, Professor Sunstein concludes that rather than curing the underlying problem, cost-benefit analysis “incorporates and perpetuates that problem.”¹²⁸ Despite his significant critique for the reasoning used in the opinion and his criticism of the cost-benefit analysis process in the *Vande Zande* case, Professor Sunstein’s general conclusion in the article is one of commendation for the cost-benefit analysis process: “A great virtue of cost-benefit analysis, or a proportionality test, is that it puts the resistance to its proof. It should be clear that a competent cost-benefit analysis calls for attention to the benefits to the

118. *Id.* at 1908.

119. Sunstein, *supra* n. 12, at 1906 (footnote omitted).

120. *Id.* at 1907. This point has additional significance given Judge Posner’s recent endorsement of expanded use of cost-benefit analysis in the common law context and as a tool for judges in general. See generally Posner, *supra* n. 35.

121. Sunstein, *supra* n. 12, at 1907.

122. *Id.* at 1908.

123. *Id.*

124. *Id.*

125. *Id.*

126. Sunstein, *supra* n. 12, at 1908 (reminding readers of “Judge Posner’s casual empiricism with respect to telecommuting, [and] his suggestion that workers need to perform in teams with supervisors, lest their productivity be ‘greatly’ diminished”).

127. *Id.*

128. *Id.*

employee, not simply to the employer, of requested accommodations.”¹²⁹

As is clear with all decision-making, the devil is in the detail of competent application. While Sunstein notes the need to recognize that both “intractable intuitions” and “stigmatic harm”¹³⁰ can undermine any cost-benefit analysis, his conclusion sweeps away the difficulties of the reality of application of cost-benefit analysis. “An advantage of an inquiry into costs and benefits, and of a comparison of the two, is that it makes it possible to test intuitions, and practices, by reference to reality.”¹³¹ This conclusion involves some optimism, focusing on the ideal of cost-benefit analysis rather than its actual application. The choice of cost-benefit analysis as the methodology does not guarantee full assessment of costs.

IV. GLOBAL CLIMATE CHANGE AND COST-BENEFIT ANALYSIS

In *Climate Change Justice*, Professors Sunstein and Eric Posner counter the argument that the U.S. should bear substantial portions of the costs of climate change mitigation under theories of distributive and corrective justice.¹³² They assert the tremendous economic cost that would be borne by the United States, minimal risk from climate change, and relatively little, if any, benefit.¹³³ Because China and India, and other developing countries are able to produce cheaper goods, many feared that the United States would be at a competitive disadvantage if it agreed to the Kyoto Protocol. A unanimous resolution in the Senate urged a refusal to ratify.¹³⁴ Of course national policy is not created in a political vacuum. Legislators are influenced by the public, and interest groups, and many groups have been vocal in support of the Kyoto Protocol. Congress has begun to regard the issue of global climate change more seriously as a result of growing public pressure.¹³⁵ After initially expressing reservations in the United Nations meeting in Bali in December 2007, the United States advocated a comprehensive treaty that could even include some mandatory standards.¹³⁶ The authors in *Climate Change Justice* present this sentiment as the reason for the article.

Many people believe that the United States is required to reduce its greenhouse gas emissions beyond the point that is justified by its own self-interest, simply because the United States is wealthy, and because the nations most at risk from climate change are poor. This argument from distributive justice is complemented by an argument from corrective justice: The existing “stock” of greenhouse gas emissions owes a great deal to

129. *Id.* at 1906–07 (footnote omitted).

130. *Id.* at 1908.

131. *Id.* at 1907.

132. Posner & Sunstein, *supra* n. 16.

133. *Id.* at 1565.

134. See Sen. Res. 98, 105th Cong. (July 25, 1997).

135. See Victor B. Flatt, *Taking the Legislative Temperature: Which Federal Climate Change Legislation Proposal Is “Best”?* 102 Nw. U. L. Rev. Colloquy 123 (2007). Additionally, United States policy is undergoing a shift in its recognition of the problem. See e.g. Stephen L. Kass & Jean M. McCarroll, *The Road Map from Bali: Part 1*, 239 N.Y. L.J. 3 (Feb. 22, 2008); Rosanne Skirble, *Prospects Improve for U.S. Global Warming Law* (Voice of Am. Jan. 31, 2008) (radio broadcast) (noting presence of U.S. leadership in the United Nations meeting in Bali in Dec. 2007) (available at <http://www.voanews.com/english/archive/2008-01/2008-01-31-voa28.cfm?CFID=89935400&CFTOKEN=86752463>).

136. Kass & McCarroll, *supra* n. 135.

the past actions of the United States, and many people think that the United States should do a great deal to reduce a problem for which it is disproportionately responsible.¹³⁷

In this article, Professors Sunstein and Eric Posner assess “standard arguments from distributive and corrective justice” and find that these arguments “fail to provide strong justifications for imposing special obligations for greenhouse gas reductions on the United States.”¹³⁸ This statement uses the demanding test of “strong justification” to frame the burden of proof issue. However, suggesting that corrective or distributive justice is the sole motivator of U.S. energy policy seems frivolous. No one suggests that a program is motivated solely by corrective and distributive justice considerations. Rather, the primary motivation for such a plan is found in combating the physical effects of greenhouse gas. Although the authors start from the premise that nations are not moral agents, they ultimately sign on to the idea of significant U.S. participation in a carbon reduction effort based on a welfare principle.¹³⁹ The purpose of *Climate Change Justice* appears not to be to defeat a greenhouse gas reduction agreement, but rather to deny scholars and policymakers one argument for this ultimate outcome.

If the United States agrees to participate in a climate change agreement on terms that are not in the nation’s interest, but that help the world as a whole, there would be no reason to object, certainly if such participation is more helpful to poor nations than conventional foreign-aid alternatives. Compared to continued inaction, participation on those terms would be entirely commendable. But the commendation should not be muddled by resort to crude arguments from distributive and corrective justice.¹⁴⁰

The focus of *Climate Change Justice* is not on the policy outcome; it is not about whether to enter a treaty on greenhouse gas reduction; rather, it seeks to defeat appeals to corrective and distributive justice as part of the analysis.¹⁴¹

In a recent article, Professor Daniel Farber responds to these arguments, asserting “that the United States has a moral obligation to be accountable for its contribution to the climate change problem,” and sets forth a possible “mechanism for providing climate change compensation.”¹⁴² Farber explores arguments against such responsibility, noting that the issue is far from academic since developing countries are making demands for compensation for global climate change and continuing greenhouse gas emissions.¹⁴³

137. Posner & Sunstein, *supra* n. 16, at 1565.

138. *Id.*

139. Posner & Sunstein, *supra* n. 16.

140. *Id.* at 1611–12.

141. Despite their criticism of the corrective justice rationale for carbon reduction, the authors ultimately agree with the policy of carbon reduction. Their attack depends on an all-or-nothing application of corrective justice as a standalone goal rather than assessing corrective justice as one of the cumulative positive effects of carbon reduction. Investment of significant scholarly effort to attack a rationale while agreeing with the policy seems non-utilitarian, even inefficient. The article’s conclusion provides a clue to the utility of the attack from the perspective of the authors. The conclusion refocuses on the central issue of the moral authority of nations. In their final sentence, the authors note that the article defeated “influential arguments in a way that might bear not only on climate change, but also on a wide range of other questions raised when some nations make claims on others.” *Id.* at 1612. Remembering the premise that nations are not moral agents suggests that such other questions include arguments that governments bear responsibility for their actions.

142. Daniel A. Farber, *The Case for Climate Compensation: Justice for Climate Change Victims in a Complex World*, 2008 Utah L. Rev. 377, 379.

143. *Id.* at 380. Farber rejects the argument that because the U.S. is not the independent cause of the harm of global climate change, it is somehow free from responsibility. Similarly, he rejects the claim that because U.S.

Farber also adds evidence to the numbers provided by Posner and Sunstein to establish the disproportionate role of U.S. to the physical phenomenon of global climate change¹⁴⁴ and makes the “moral case for compensation,”¹⁴⁵ noting that “[c]ompensation for harm caused by unreasonable conduct is, after all, one of the key purposes of our tort system.”¹⁴⁶ Farber relies on traditional tort doctrine, including the established example of harm caused by “two simultaneous negligent fires”¹⁴⁷ in which courts consistently hold both actors liable. Applying the analysis of the U.S. Supreme Court in *Massachusetts v. EPA*,¹⁴⁸ Farber finds that the argument against corrective justice in this context “greatly exaggerates both the need for precision in matching victims and compensators and the degree to which compensation would impose burdens on wholly innocent parties.”¹⁴⁹ Farber also raises the possibility that a “more tailored” compensation mechanism could be devised.¹⁵⁰

Professor Farber’s discussion also employs a cost-benefit comparison of whether “the emissions causing activity resulted in greater harm than benefit to global social welfare.”¹⁵¹ Although he asserts that nations themselves “should be considered to have moral rights and responsibilities,” he does not rely on this assertion to make his case for moral responsibility for emissions.¹⁵² Farber presents the strict and retroactive liability compensation system of CERCLA as legal “precedent for a rigorous cost-recovery system.”¹⁵³ On the question of whether reductions of carbon emissions would present a distribution of wealth from the U.S. to poor nations, Farber demonstrates the power of framing often noted by Professor Sunstein, disputing the assertion that such reductions by the U.S. would constitute a redistribution of wealth only “if unrestricted emission—and therefore, unlimited climate change—is considered to be the baseline.”¹⁵⁴ He flips the analysis by adjusting the baseline.

Compared to this baseline of unrestricted emissions, restricting emissions makes poor countries better off and costs rich countries money, so it can be considered a redistribution

“contribution[s] to climate change will [soon] be swamped by China,” the U.S. is relieved from responsibility for harm to the global climate. *Id.* at 387–88.

144. *Id.* at 386. Farber emphasizes the importance of the historical contributions to global climate change and addresses the more serious moral question of “the extent of responsibility for causing climate change.” *Id.* at 397.

145. Farber, *supra* n. 142, at 388.

146. *Id.* at 387. See also Farber, *supra* n. 6, at 1641; Eric Neumayer, *In Defence of Historical Accountability for Greenhouse Gas Emissions*, 33 *Ecological Econ.* 185, 187 (2000).

147. Farber, *supra* n. 142, at 391.

148. *Id.* at 401–03 (analyzing *Mass. v. EPA*, 549 U.S. 497 (2007)).

149. *Id.* at 397. Agreeing with Posner and Sunstein that “it is not possible to precisely match the burden of compensation with individual fault,” Farber nonetheless argues that despite uncertainty, the match of cause and harm is sufficient under traditional legal principles to find the U.S. liable. *Id.* at 388.

150. *Id.* at 397 (noting the need to “hesitate before we accept the demands for such a high level of precision. We live in a much more complex world where harms lack the simplicity of automobile collisions. If we demand a high level of precision to establish a moral claim, we also render morality irrelevant to the most serious harms created by modern society.”).

151. Farber, *supra* n. 142, 397–98.

152. *Id.* at 400. Finding “the collective responsibility . . . irrelevant to the question of whether the United States has a duty to reduce future emissions,” Farber emphasizes the responsibility of shareholders and voters to control these larger actors. *Id.* (footnote omitted).

153. *Id.* at 410.

154. *Id.* at 404.

of wealth. If, instead, we consider the baseline to be a world in which climate is stable, then the shoe is on the other foot. Starting with that baseline, we would say that the United States and other wealthy emitters are redistributing income to themselves at the expense of poor countries by their ongoing damage to the planetary climate system.¹⁵⁵

Professor Farber answers the moral and legal questions arguments raised in *Climate Change Justice*. Other questions remain, however, about how to configure cost-benefit analysis approaching legal and policy decisions. In *Climate Change Justice*, the authors provide extensive the numbers on carbon emissions of different countries.¹⁵⁶ The authors demonstrate that past actions of the United States are responsible for the “stock” of greenhouse gas emissions currently in the atmosphere.¹⁵⁷ Nevertheless, they conclude that actions by the United States to reduce greenhouse gases beyond levels indicated by national self-interest do not deserve recognition under the concept of distributive justice because nations are not moral agents and because distribution of money to poor people is better than reductions of greenhouse gases, as a matter of corrective and distributive justice.¹⁵⁸

The current stock of greenhouse gases in the atmosphere is a result of the behavior of people living in the past. Much of it is due to the behavior of people who are dead. The basic problem for corrective justice is that dead wrongdoers cannot be punished or held responsible for their behavior, or forced to compensate those they have harmed.¹⁵⁹

In the end, all three scholars agree on the need to address global climate change as a matter of social welfare. In *Climate Change Justice*, the authors conclude by stating:

If the United States agrees to participate in a climate change agreement on terms that are not in the nation’s interest, but that help the world as a whole, there would be no reason to object, certainly if such participation is more helpful to poor nations than conventional foreign-aid alternatives. Compared to continued inaction, participation on those terms would be entirely commendable. But the commendation should not be muddled by resort to crude [and unhelpful] arguments from distributive and corrective justice.¹⁶⁰

Thus, the policy issue is not the area of dispute. Rather, the disputed area involves whether justice arguments are available in this and other policy areas. The authors do not object to programs of greenhouse gas reductions by the U.S. that would have the effect of helping other nations:

As compared to the status quo, or to an agreement that requires all nations to freeze their

155. Farber, *supra* n. 142, at 404.

156. Posner & Sunstein, *supra* n. 16, at 1579.

157. *Id.*

158. Robert E. Scott, *The China Trade Toll: Widespread Wage Suppression, 2 Million Jobs Lost in the U.S.* (Econ. Policy Inst. Briefing Paper No. 219) (published July 30, 2008) (available at <http://www.epi.org/content.cfm/bp219>) (documenting lost wages of more than \$19 billion in 2007 and U.S. trade deficit with China that has grown from \$84 billion in 2001 to \$262 billion in 2007).

159. Posner & Sunstein, *supra* n. 16, at 1593. As a larger take-away point, the authors also note that their claim “has general implications for thinking about [both] distributive and corrective justice [arguments] in the context of international law and international agreements.” *Id.* at 1573. The implication of the hard definitions of corrective and distributive justice employed by the authors is that no government action or policy can attain the moral high ground of the category as construed, which appears to be limited to judicial causes of action for past injuries.

160. *Id.* at 1611–12.

emissions at existing levels, it is better, from the standpoint of distributive justice, for the United States to join an agreement in which it agrees to provide technological or financial assistance to poor nations, and it may even be better, from that standpoint, to scale back emissions more than domestic self-interest would dictate.¹⁶¹

The non-utilitarian aspect of investing effort to defeat not an outcome but rather a particular justice argument rests on the principled argument against muddying the debate with ideas about justice. Despite the work of assembling empirical data to establish the dominance of U.S. contributions in the past and the likelihood that China will “swamp” U.S. contributions in the future, the argument of *Climate Change Justice* rests primarily on non-empirical assertions: (1) the difficulty of matching victims with wrongdoers makes the corrective and distributive justice model a poor fit to this issue; (2) reducing greenhouse gas is a less perfect remedy than giving cash to victims, and (3) nations are collections of people rather than moral agents.

A. Framing Decisions

The authors start from “admittedly controversial assumptions.”¹⁶² The first of these is “the world, taken as a whole, would benefit from an agreement to reduce greenhouse gas emissions.”¹⁶³ The second is that “some nations, above all the United States (and China as well), might not benefit, on net, from the agreement that would be optimal from the world’s point of view.”¹⁶⁴ The analysis proceeds to take a cost-benefit analysis that compares not the costs and benefits to the actor in question (the U.S.), but rather the costs and benefits to the entire world.¹⁶⁵ The argument, thus, concludes that “the standard resolution of the problem is clear: The world should enter into the optimal agreement, and the United States should be given side-payments in return for its participation.”¹⁶⁶

The ordinary framing of cost-benefit analysis proceeds from the perspective of the costs and benefits that accrue to the decision maker. The cumulative approach of *Climate Change Justice* rejects this orientation for a framework in which the effects to the world are compared with the effects on each nation.¹⁶⁷ The inquiry seeks to “establish the complex relationship between the interests of the world, taken as a whole, and the interests of the United States.”¹⁶⁸ This framework is far from standard cost-benefit analysis, however. It reconfigures the typical comparison of costs and benefits, pitching the analysis from a world view and, thus, drawing the analysis into a tragedy of the commons dilemma in which no actor can respond effectively. Is the world-wide view of interests the standard resolution of cost-benefit analysis? Ordinary cost-benefit analysis assesses costs and all benefits that flow to the decision maker. The fact that some other party will benefit is not ordinarily included as a detriment to the decision

161. *Id.* at 1591.

162. *Id.* at 1568.

163. Posner & Sunstein, *supra* n. 16, at 1568 (footnote omitted).

164. *Id.* (footnote omitted).

165. *Id.* at 1568–69.

166. *Id.* at 1569 (footnote omitted).

167. *Id.* at 1573.

168. Posner & Sunstein, *supra* n. 16, at 1573.

maker. Rendering an external benefit as a detriment to the decision-maker requires justification. Internalizing external benefits as detriments flips the ordinary calculus. Framing the issue as one for consideration of the world focuses the inquiry at a level disconnected from the decision-maker involved (the United States). No supranational decision-maker is available to implement the results of the analysis. The normative judgment drawn from this framework lacks a decision maker. Does the test mean that the decision-maker fears that, without a hard-line stance, other countries are less likely to carry a share of the cost of carbon reduction? Does this approach overvalue confrontation on the part of the U.S. and undervalue its ability to galvanize support among nations for a common goal? If this is the justification, it seems to require a complex analysis of risks of coercion or threats by the U.S. Moreover, the analysis appears to discard reputational considerations and the possible benefits of collaborating with the international community. The flavor of this approach is reminiscent of the Cold War or nuclear buildup in which “psyching” out the other party is part of the calculation.

To return to the ordinary framing of cost-benefit analysis, take an example from the commonplace perspective of an individual. Suppose that you would benefit from the tax break associated with donating used clothing and furniture to charity. In other words, the tax benefit to you is greater than the value you place on the items. Is the fact that others might benefit more than the decision-maker relevant? If one figures that the benefit to the poor people who would receive the contributed items actually exceeds the benefit to you, does this result in a cost-benefit decision against the contribution? Perhaps a better indicator of winners and losers would be data on the major corporations that benefit by exporting manufacturing away from countries that have more stringent environmental regulations and higher wages for workers. The corporations and their shareholders may be clearer beneficiaries than the loose collection of people formed into nations, many of whom do not recognize benefit from the export of manufacturing. Another inquiry would relate to the consumers of the developed countries, including the U.S., who arguably benefit by the export of manufacturing to China. They get lower cost consumer goods and cleaner skies. There might be detriments to be included in such a calculation as well, such as loss of jobs to foreign operations. Dramatic examples are apparent in the rust belt and in the many small towns and small businesses that do not see the export of production to China as a net benefit to them. Is the relevant question the output of greenhouse gases from a particular geographical area such as China? Does it matter to the analysis that a significant portion of the greenhouse gas production results from pollution by proxy by Western companies that have moved manufacturing facilities from the U.S. to Asia?¹⁶⁹

169. Just as Professor Sunstein identified the “real question” of reasonable accommodations under the ADA by reference to its underlying goals, finding the real questions in climate change policy is central to a correct assessment of the interests. Perhaps the real question is whether greenhouse gas reduction effects are consistent with corrective and distributive justice, rather than whether its goals are solely directed at corrective and distributive justice. The central principle of note is that “nations are not people; they are collections of people.” *Id.* at 1571. Nonetheless, the authors treat nations as individual entities in assessing self-interest; however, surely nations are collections of people for purposes of economic benefits and costs as well as for moral inquiry.

B. *Nations as Amoral Actors*

In *Climate Change Justice*, the authors start from an assertion as opposed to an assumption: nations are not moral agents. “[N]ations are not people; they are collections of people.”¹⁷⁰ The point receives emphasis in the article:

Nations are not individuals: they do not have mental states and cannot, except metaphorically, act. Blame must ordinarily be apportioned to individuals, and it is hard to blame all greenhouse gas-emitters for wrongful behavior, especially those from the past who are partly responsible for the current stock of greenhouse gases in the atmosphere.¹⁷¹

Nevertheless, the article treats nations as individual winners and losers in the carbon contest, based on their production of carbon and production of goods, giving the metaphor of individual action real application in assessing national self-interest. The real question seems not to be the moral status of nations but their positions relative to each other in terms of GNP and other economic factors. If this data is relevant, we are treating the nations as agents, if not moral agents, with reasons for choosing, and a relevant question seems to be whether the success of some actor-nations deprives others of success and whether the ability or willingness to pay for uneven benefits is relevant to the inquiry.

Two different conceptualizations of nations have significance. First, *Climate Change Justice* treats nations as entities—rational actors who assess their own self-interest as a single entity. Second, nations are treated as a collection of individuals with their own self-interests—many of which may conflict with that of other individuals and groups inside the nation. Both conceptualizations may be useful in assessing policy, but the rule of consistent measurement suggests that arguments cannot switch from one to the other conception without a justifiable reason for the shift. The flat assertion that nations lack status as moral actors raises a of myriad questions. Is the United States involved in fraudulent representations when it calls on other nations to aspire to better records on human rights on the basis of moral authority? Or, not being a moral actor, can the U.S. use it exhortations of moral authority with impunity? Put this concept together with the device of assuming rather than deciding and troubling puzzles persist. If torture serves our public interest is it justifiable because it serves the perceived self-interest? Can a nation rely on its status as a non-moral actor when the actions it takes are destructive to others? Is there a need to attempt to justify torture once the concept of nations as amoral actors receives acceptance?

C. *Goals, Effects, and Money: The Perfect Is Enemy of the Good*

The authors argue against the distributive theory of justice in the greenhouse gas debate on the ground that it does not meet the burden of establishing it is the best means of distribution, asserting that even assuming that redistribution from rich nations to poor nations is desirable, “it is not at all clear that it should take the particular form of a deal

170. *Id.*

171. *Id.* at 1572.

in which the United States joins an agreement that is not in its interest.”¹⁷² Framing the issue as an all-or-nothing test—rather than one element in the benefits of greenhouse gas reductions—isolates the issue of justice as a single test, requiring that justice is the sole intent of the action.¹⁷³ “[G]reenhouse gas reductions are a crude and somewhat puzzling way of attempting to achieve redistributive goals.”¹⁷⁴ Also central to the *Climate Control Justice* argument is a requirement that collective and distributive justice exists only when monetary awards are given to affected individuals. The argument presents corrective and distributive justice as goals (rather than desirable effects) and faults the system that fails to perfect the goal of monetary damages. “If the United States wants to assist poor nations, reductions in greenhouse gas emissions are unlikely to be the best way for it to accomplish that goal.”¹⁷⁵ This approach not only identifies collective and distributive justice as a goal rather than an effect, it also rejects any solution other than giving money to the victims. The framework determines the result. Under this approach, collective and distributive justice must be the sole goal rather than another desirable effect of greenhouse gas reductions. It, thus, presents an example of the old saying “the perfect is enemy of the good.”

The article’s application of cost-benefit analysis of the interests is vulnerable to some of the criticisms that Professor Sunstein pointed out in his critique of Judge Posner’s cost-benefit analysis in the ADA context.¹⁷⁶ Attention to four areas illustrates the flex in cost-benefit analysis as practiced by scholars and judges: (1) Is the world as a whole the framework for comparison or should the analysis compare costs and benefits to individual nations who are deciding policy actions? (i.e., setting the scope or framework of cost and benefits); (2) What are the goals vs. effects?; (3) Does the analysis treat nations as collectives or as collections of individuals?; (4) Does the balance include all costs or sequester and elevate a factor, requiring the perfect remedy of money for example?

Ultimately, the authors accept the merits of entering a reduction a matter of welfare and policy. “We do not question the proposition that an international agreement to control greenhouse gases, with American participation, is justified, and all things

172. *Id.* at 1584.

173. In *Climate Change and Animals*, 155 U. Pa. L. Rev. 1695 (2007), Professors Sunstein and Wayne Hsiung apply the same all-or-nothing approach to the issue of species loss from climate change. The authors derive a dollar value for the expected loss to Americans from species extinctions resulting from climate change. They suggest that climate change policy should take into account nonhuman life and the suffering and death of animals that will result from climate change. *Id.* at 1740. By multiplying the number of species projected to be lost from climate change by the estimated dollar loss per species, they estimate that the global warming induced species loss could cost Americans between \$162 and \$399 billion per year, or 1.4% to 3.5% of GDP. Weighing the cost of compliance with the Kyoto protocol with the benefit of avoiding the loss of animal life, they conclude that despite the significant costs of species loss, “[t]he net value of the treaty for the world . . . is still negative, at -\$77 billion annually, given the heavy U.S. costs.” *Id.* at 1736. While they argue that people should care about the suffering that climate change will inflict upon animals, they do not present a cumulative cost-benefit analysis of the issue of positive and negative effects of Kyoto that includes the effects on animals. This presents the same sort of all-or-nothing approach used in *Climate Change Justice*. The benefits of alleviating the suffering flow to the animals themselves and also to humans by virtue of an array of advantages, including but not limited to, our self-regard as moral agents.

174. Posner & Sunstein, *supra* n. 16, at 1571.

175. *Id.* at 1572.

176. Sunstein, *supra* n. 12.

considered, the United States should probably participate even if the domestic cost-benefit analysis does not clearly justify such participation.”¹⁷⁷ While the authors “favor a welfarist approach to international questions,”¹⁷⁸ the chosen framework of goals rather than effects means that welfarist actions do not count in the cost-benefit scale. Thus, the argument denies significance to welfarist actions and deprives greenhouse gas reduction of any credit for collective and distributive justice effects.¹⁷⁹ At its base, this claim is that emissions reductions are not the best way to achieve corrective justice. “Our only claims are that the aggressive emissions reductions on the part of the United States are not an especially effective method for transferring resources from wealthy people to poor people, and that if this is the goal, many alternative policies would probably be better.”¹⁸⁰ This point fails to consider, however, the fact that other benefits of great significance accrue from greenhouse gas reductions, such as arresting the rise of oceans and the loss of wildlife. Just as emotional and stigmatic effects recognized by the ADA deserve recognition, reputational and public perception concerns may lay claim to consideration under the policy making of greenhouse gas reduction policy.¹⁸¹ Investing in the environment through protective measures preserves human and social capital. The U.S. is looked to as a leader on issues from preservation of democracy to environmental justice, creating the likelihood that difficulties of measuring exact self-interest will be balanced by international goodwill generated by global benefits. Helping the developing world move toward minimizing greenhouse gas-producing energy sources would save the money for both the U.S. and other nations. Moreover, helping the developing nations now is much less expensive than needing to help them convert from a greenhouse gas-producing infrastructure in the future.

The numbers are irrelevant to the dominant argument, which relies on syllogistic rather than empirical force. Whatever the numbers and assumptions, this mismatch defeats the collective and distributive justice application, according to Posner and Sunstein, because of its difficulty in identifying wrongdoers and matching them with victims. The identity problem that arises as a result of the harm being inflicted by actors in the past overwhelms the analysis. “[H]olding Americans today responsible for the activities of their ancestors is not fair or reasonable on corrective justice grounds, because current American’s are not the relevant wrongdoers; they are not responsible for the harm.”¹⁸² The syllogistic nature of the argument is obscured by the array of facts and information the authors provide. Nevertheless, the fact that the force of the argument is syllogistic rather than empirical is clear when one considers the analysis and

177. Posner & Sunstein, *supra* n. 16, at 1572 (footnotes omitted).

178. *Id.*

179. *Id.* The authors also draw a larger principle from the analysis, finding that the difficulties in the climate change context (nations are not people and money is the best solution to all problems of distributive and corrective justice) has applicability to other areas such as reparations. *Id.*

180. *Id.* at 1591.

181. Public opinion perception is important in environmental issues. See, e.g. Adam Douglas Henry, *Public Perceptions of Global Warming*, 7 Hum. Ecology Rev. 25 (2000); Paul M. Kellstedt, Sammy Zahran & Arnold Vedlitz, *Personal Efficacy, the Information Environment, and Attitudes toward Global Warming and Climate Change in the United States*, 28 Risk Analysis 113 (2008); Willett Kempton, *Will Public Environmental Concern Lead to Action on Global Warming?* 18 Annual Rev. Energy & Env. 217 (1993).

182. Posner & Sunstein, *supra* n. 16, at 1593.

also the fact that starker numbers would not affect the article's argument. Making the numbers even worse in terms of the imbalance of U.S. contributions—say 80% or 90%—of both stocks and flows of carbon would not affect the analysis. Increases in the flow or stock of greenhouse gas attributable to the U.S. would not change the conclusion. Stripped of numbers, the syllogism presents its essential argument: (1) collective and distributive justice requires individual victims and individual wrongdoers; (2) greenhouse gas reduction by the U.S. is not justice for individual victims by individual defendants based on tort concepts; and (3) collective and distributive justice is not a good fit for greenhouse gas reduction. A separate syllogism presents the requirement that collective and distributive justice requires the remedy of direct payment to the individuals harmed. And again, another syllogism asserts as a “given” that nations are not moral entities and, thus, cannot be held accountable under moral standards. The authors assert that the arguments for “corrective justice runs into the standard problems that arise when collectivities, such as nations, are treated as moral agents: Many people who have not acted wrongfully end up being forced to provide a remedy to many people who have not been victimized.”¹⁸³

VI. CONCLUSION

Policy analysis impacts every aspect of modern life, including public health and the sustainability of the planet—raising puzzles that even Shakespeare could not have imagined. The growing reliance on cost-benefit analysis in judicial decision-making, agency regulations, and scholarly analysis poses complicated comparisons and competition of interests and values of economic enterprise on one hand and public health and safety on the other. The efficacy of the tool of cost-benefit analysis, which has increasing significance in today's legal world, depends on accurate measures and comparisons.

The promise of finding a method that brings greater certainty to important decisions holds great appeal. Significant questions exist regarding whether cost-benefit analysis fulfills this promise, however. Modest variations or nudges of policy can, of course, result in profound differences in the results of legal analysis.¹⁸⁴ Scholarship on cost-benefit analysis reveals controversy regarding its use, including questions about whether indeterminacy is decreased by the use of this analytical frame. Some commentators and legal philosophers suggest that cost-benefit analysis presents a kind of value judgment from the beginning—a perspective that efficiency, or a certain brand of efficiency, loads the deck in favor of a *laissez faire* approach and imports values into the law that a statute had rejected or disciplined. Professor Sunstein's assertion that “cost-benefit analysis . . . can operate as a vessel for unreliable intuitions rather than a way of disciplining them”¹⁸⁵ provides a warning. Disagreements among preeminent scholars and jurists provide dramatic examples of the need for rigor in the identification of interests. Moreover, such disagreements underscore the indeterminacy of cost-benefit

183. *Id.* at 1565.

184. Sunstein, *supra* n. 12, at 1898 (noting that a “modest variation” of the test applied in the area would make cost relevant).

185. *Id.* at 1896.

analysis and suggest that a necessary preliminary step in using the process is the identification of the interests at issue and, additionally, the law's weighting of those interests. Professor Sunstein's explication of the profound differences in the identification of the "real questions" in law and policy suggests a number of provisional judgments. First, we need more empirical research into the way that lawmakers (including legislators, regulators, and judges) and thought-leaders (such as executives and scholars) marshal cost-benefit analysis.

In cases where cost-benefit analysis is available to judges or regulators, the analysis of what questions are the "real questions" is by no means established by the method. Just as reasonable minds can differ regarding the interpretation of statutes, they can differ regarding the precise dimensions of the costs and benefits and analysis in any given situation. Indeed, finding the right interpretation of the law for purposes of cost-benefit analysis is very similar to the task of interpretation under traditional judicial inquiry and under any prudential balancing of factors. While this point is not surprising and is not a basis for rejecting cost-benefit analysis, it raises questions about value of cost-benefit analysis in judicial or agency decision-making. The existence of an economic template does not trump laws, and laws often include judgments about moral choice. Economics does not deprive sources of law of the power to alter the cost-benefit analysis. When a statute requires a balancing of costs and benefits, one of the costs considered should be the regulatory process of counting those costs. Express vetting of measures employed in cost-benefit analysis should be conscious and specific. Do the benefits of using the system outweigh its costs? Part of such an empirical and theoretical inquiry should include considerations such as those identified by Professor Sunstein in his scholarship on assessing the real questions at issue and the legal weight afforded each interest. These points suggest that we need to know much more about how judges, agencies, and scholars employ cost-benefit analysis under the law.

