Introduction

We live in dangerous times. As this issue of the *Yale Journal on Regulation* goes to press, the nation stands at war with Iraq, and Americans live in anxiety over the potential recurrence of terrorist attacks. In reaction to these developments, we have accepted drastic changes in laws intended to hold the government accountable and to protect civil liberties, changes that would have been unthinkable on September 10, 2001. Other profound transformations in domestic policy, especially continual retreats in the interpretation and enforcement of laws that protect public health, worker safety, and the environment, are gaining momentum.
Not long ago—indeed, up until September 11, 2001—Congress and the executive branch, joined from time to time by the courts, were engaged in a robust debate about whether and how to accomplish reform of the regulatory state to curb what many argued was its excessive over-protectiveness. Unable to achieve legislative changes requiring strict cost-benefit analysis as a prerequisite for action, reformers pursued their crusade administratively, where they were met with equally forceful opposition to their most radical proposals. Progress was slow, but the debate itself was transparent and healthy, worthy of a great, pluralist democracy. The 2000 election did not change this balance; it was so close that it did not produce a clear mandate for either end of the political spectrum on these issues.

So what happened to drive this important area of domestic policy underground? In 2000, among the best and the brightest of the regulatory reformers took over the executive branch, no doubt expecting the usual clash of ideology with their opposition at the other end of Pennsylvania Avenue. Instead, Congress and the media were overwhelmed by the cataclysms that began on that infamous September day. Regulatory issues were pushed so far down on the list of political priorities that they almost vanished from public view. Elected leaders remain either too preoccupied with foreign policy to pursue such issues, or they believe that to quarrel over domestic problems is unpatriotic. As the debate has sunk to a whisper, the one-sided work at the administrative level has continued, accelerated by the legislature’s inattention.

No matter what perspective one has on the merits of the campaign to accomplish regulatory reform, the unilateral and \textit{sub rosa} nature of these efforts should be extraordinarily disconcerting. It may not be troubling to regulatory reformers that the pendulum of health and safety policymaking has swung so far to the right. It should be disturbing to everyone that only a few thousand insiders seem aware of this shift.

The book that is the subject of this Review, \textit{Risk Regulation at Risk: Restoring a Pragmatic Approach}, by Professors Sidney Shapiro and Robert Glicksman, is, first and foremost, an effective effort to correct this imbalance by articulating and defending the principles that justify protective risk regulation.\footnote{SIDNEY A. SHAPIRO \& ROBERT L. GLICKSMAN, RISK REGULATION AT RISK: RESTORING A PRAGMATIC APPROACH (2003) [hereinafter RISK REGULATION AT RISK].} Shapiro and Glicksman argue not only that the statutes make sense, but also that the vitality of the \textit{existing} regulatory state must be restored by making some targeted improvements. The book is important because it represents one of only a handful of recent efforts to rationalize the foundation of laws that were passed in the 1970s and 1980s and that remain, virtually untouched, on the books. Conservatives should
welcome this development as enthusiastically as progressives, and
democrats (with an emphatically small "d") should welcome it most of all.

Shapiro and Glicksman have spent their careers disputing claims that
overzealous regulation has sapped not just our economy but also the
quality of life in America. They are in a distinctive minority. Many,
perhaps most, academics writing about these issues embrace the opposite
perspective, condemning “command and control” health and safety
regulation across-the-board. In surprisingly popular books such as Philip
Howard’s The Death of Common Sense, the deep social and cultural
trends that produced these laws are caricatured in a relentless effort to
discredit the regulatory state, supported by the resources and influence of
regulated industries.

In contrast, Shapiro and Glicksman argue that when Congress passed
such ambitious laws as the Clean Air Act, the Clean Water Act, the Safe
Drinking Water Act, the Toxic Substances Control Act, the Food and
Drug Act, and the Occupational Health and Safety Act, it engaged in a
heroic effort to balance the need to act in the face of scientific uncertainty
to prevent irrevocable injury to public health and the environment with the
understandable reality that the nation has limited resources to solve social
problems. Far from being a fad produced by the social revolution of the
1960s, they argue, the laws are consistent with pragmatism, the most
prominent American philosophical tradition. Pragmatism holds that sound
law and policy is best crafted by groups of critical and independent
thinkers engaged in robust debate that is informed by all available
information and a wide range of social and economic values. The result,
they say, is inevitably a compromise among disparate interests, with the
important caveat that, if the compromise does not work, the next
generation of pragmatists will discard the policy and try something else.

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3 Some notable examples of work urging fundamental reform of traditional regulation from
a relatively conservative direction include: ROBERT W. CRANDALL ET AL., AN AGENDA FOR FEDERAL
REGULATORY REFORM (1997) (urging far more pronounced use of cost-benefit analysis in federal
policymaking); STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK
REGULATION (1993) (condemning the existing regulatory system as being overly aggressive with
respect to relatively insignificant risk); W. KIP VISCUSI, FATAL TRADEOFFS: PUBLIC AND PRIVATE
RESPONSIBILITIES FOR RISK (1992) (explaining the perceived economic inefficiency of traditional
regulation and its social costs).

4 PHILIP K. HOWARD, THE DEATH OF COMMON SENSE: HOW LAW IS SUCCOFATING
AMERICA (1994) (giving numerous anecdotal examples of excessive, wasteful regulations produced by
public health and safety laws).

The remainder of this Review explains how Shapiro and Glicksman define pragmatism, both generically and as it should affect health and safety regulation. It considers the accessible and useful concepts they develop not only to explain the existing statutory framework but also to guide its future development. The Review concludes with an evaluation of their agenda for change and urges them to develop this aspect of their work as quickly as possible.

Before we proceed to a consideration of *Risk Regulation at Risk*, it is worth noting that in 1999, Daniel Farber, a prolific writer who teaches at the University of Minnesota School of Law, published a somewhat similar book entitled *Eco-Pragmatism: Making Sensible Environmental Decisions in an Uncertain World*. Professor Farber argues in essence that the philosophy of pragmatism provides a roadmap for reforming environmental law. The book received considerable attention at the time, with several reviews in prominent legal journals recognizing the significance of its effort to establish an alternative to the conservative view that economic analysis must determine the outcome of risk regulation.

Although *Risk Regulation at Risk* also has its foundation in pragmatism, it takes a very different approach to the analysis of existing law and to prescriptions for reform. Most obviously, Farber focuses on environmental law, while Shapiro and Glicksman address the full range of health and safety regulation, providing analyses and comparisons drawn from labor, food and drug safety, and consumer laws. Second, Shapiro and Glicksman root their pragmatic framework in what Congress, the courts, and the agencies have already done, developing an insightful set of categories that suggest both the standards for crafting risk regulation and the circumstances under which such regulation is appropriate. Ultimately, Shapiro and Glicksman carry the ball that was put into play by Farber much further down the field. For anyone interested in a progressive alternative to the conservative view on these issues, *Risk Regulation at Risk* provides more efficient one-stop shopping.

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Pragmatic Regulation in Dangerous Times

I. Definitions of Pragmatism

*Webster's Third New International Dictionary* defines “pragmatism” as:

an American movement in philosophy founded by Peirce and James and marked by the doctrines that the meaning of conceptions is to be sought in their practical bearings, that the function of thought is as a guide to actions, and that the truth is preeminently to be tested by the practical consequences of belief.\(^{13}\)

The term encompasses a large body of political and social science scholarship, as well as the highly influential writing of America’s preeminent educator, John Dewey.\(^{14}\) One prominent website, entitled *The Pragmatism Cybrary*, describes pragmatism as “a major intellectual movement which originated in America in the late 1800s. *The only philosophy native to America, pragmatism was inspired by American perspectives and problems.*”\(^{15}\) The philosophy of pragmatism has also spawned a school of legal analysis, represented by earlier works of Professor Farber and others.\(^{16}\)

Given his background of scholarship in the area, Farber commits surprisingly little ink in his recent book, *Eco-Pragmatism*, to explaining this venerable philosophy in the health and safety context. He describes legal pragmatists as “reacting against the increased obsession of some other legal scholars with grand theories such as economic reductionism.”\(^{17}\) He urges an alternative view of regulatory decision-making: “A convincing [pragmatic] analysis should be like a web, drawing on the coherence of many sources, rather than a tower, built on a single unified foundation.”\(^{18}\) Because environmental decisions depend on “a complex network of scientific, economic, and normative judgments,” he reminds us, it is “unlikely we can construct a structure [pointing to] a single conclusion. We can have better hopes of building an interlocking web of

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17  *ECO-PRAGMATISM*, supra note 11, at 10.

18  Id.
arguments that will support a decision based on diverse, overlapping considerations.\textsuperscript{19}

Farber is obviously right, both in theory and in practice, that health and safety policymaking must consider information drawn from a wide range of disciplines, including such disparate and highly technical fields as chemistry, epidemiology, and hydrogeology, as well as economic analysis of costs and benefits, and other relevant data of varying degrees of reliability.\textsuperscript{20} The problem with his definition of pragmatism is that the interlocking web, which places all such considerations on an equal footing, creates fertile ground for decision-making by criteria that are disconcertingly vague. Thus, Farber urges that we should “lean into the wind” when making environmental decisions,\textsuperscript{21} eliminating risk whenever “feasible,” except when costs are “grossly disproportionate” to benefits.\textsuperscript{22} He urges the application of a “hybrid” approach to environmental regulation that would apply “feasibility analysis” (a consideration of whether we have technology capable of solving the problem) but would then use cost-benefit considerations as the “benchmark” for what is feasible.\textsuperscript{23}

Under this hybrid system, we must first develop an “environmentally sensitive analysis” that presents (1) a “high” monetary value for each human life affected by the risk; (2) a “conservative risk estimate” using assumptions about exposure and adverse health effects that lead to more protective standards for eliminating risk; and (3) a “low discount rate” when we monetize future benefits, such as the value of a human life saved in the future by action taken now.\textsuperscript{24} If this environmentally sensitive assessment indicates that regulation is “clearly unwarranted,” we “ought to think very carefully about whether a regulation really is a feasible response to a significant risk.”\textsuperscript{25}

Others have written elegant critiques of this reasoning, and there is little point in repeating those thoughts here.\textsuperscript{26} However, it is worthwhile to locate Farber’s proposals on the political spectrum of views articulated in the debate over health and safety regulation. His decision to embrace the monetization of benefits plants him firmly in the middle of regulatory theory, flanked on the right by those who support application of pure cost-benefit analysis, where monetized benefits must at least equal costs, and

\begin{itemize}
\item \textsuperscript{19} Id.
\item \textsuperscript{20} For example, regulating risk always involves assessments of what risk-reducing technologies are available and affordable, questions that are often difficult to answer.
\item \textsuperscript{21} ECO-PRAGMATISM, supra note 11, at 11.
\item \textsuperscript{22} Id. at 12.
\item \textsuperscript{23} Id. at 116.
\item \textsuperscript{24} Id.
\item \textsuperscript{25} Id.
\item \textsuperscript{26} See Heinzerling Book Review, supra note 12; Schroeder Book Review, supra note 12.
\end{itemize}
on the left by those who view environmental quality as a fragile and essential condition we hold in trust for our children. When one considers that few working environmentalists advocate such pure ideas when speaking to such crucial decision-makers as members of Congress, Farber edges toward the right end of the spectrum.27

Professors Shapiro and Glicksman agree with Farber’s definition of pragmatism as the energetic consideration of moral and cultural values, specific facts, economic analysis, and science. They describe pragmatists as “antiessentialists,” by which they mean that all truth is “provisional” and that any “new idea is valuable when it serves the community better than an existing belief.”28 They explain that the only way to determine whether new ideas meet this test is to convene a “democratically organized, truth-seeking group of independent thinkers.”29 In America, such groups are alive, and, for the most part, well, especially the most powerful example, the United States Congress. Shapiro and Glicksman acknowledge that pragmatism has “no substantive content of its own,” but contend that it manages to avoid an “analytical muddle” by “adopting and clarifying existing values relevant to the problem at hand.”30

In this view, indispensable components of pragmatic ideology and its application are a transparent and inclusive process that emphasizes, in particular, open government and public participation.31 Shapiro and Glicksman do not shrink from the need to consider economic efficiency in formulating health and safety regulatory policies, but firmly reject any attempt to translate the value of human life—or other health benefits—into monetary terms and to discount such benefits when they are achieved in the future.32 This position is very significant, and locates Shapiro and Glicksman firmly to the left of Farber on both the theoretical and the actual political spectrum, making their book a more useful vehicle for understanding the full range of issues and values at stake in this important debate.

Some, including this author, are likely to be disappointed by Shapiro and Glicksman’s reluctance to embrace any particular set of substantive

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27 The best advocates on both the right and the left inevitably become more pragmatic when testifying before Congress or when writing for the popular media. On the left end of the spectrum, this phenomenon has the effect of laying ideals to one side in order to advocate more limited change. As for Farber, he is far too smart not to have realized the implications of his endorsement of monetization, although he appears almost bored when he discusses it: “So the $1-10 million figure [for the value of a single human life] strikes me as appropriate for reasons having little to do with econometric studies, and more to do with personal value judgments.” ECO-PRAGMATISM, supra note 11, at 87.
28 RISK REGULATION AT RISK, supra note 2, at 14-15.
29 Id. at 16.
30 Id. at 19.
31 Id. at 27.
32 Id. at 92-120 (rejecting discounting and similar forms of regulatory analysis). Id. at 147-77 (urging pragmatic forms of regulation that make “back end adjustments” when the evidence comes in that a regulatory approach is not cost-effective as implemented).
directives as a hedge against bad decisions by "truth-seeking" groups. Shapiro and Glicksman would be the first to admit that the specific information brought to the table for consideration by such groups will almost certainly be far from perfect. Without a predisposition to elevate one goal above all others—for example, protecting the environment to the maximum extent possible no matter how severe the risk or, conversely, taking no action until science has proved the need for it—how can we be sure that group decisions will be sound? Even if one has faith in the motivations and competence of legislative bodies, it is still difficult for those with strong opinions on how the world should be run to contemplate throwing the fate of important policies into the winds of such highly variable proceedings without mandating substantive standards to tilt the decision-making in one direction or another.

The problem is that we could all write long lists of standards and, even if we managed to avoid such vague instructions as that we should “lean into the wind,” we are very unlikely to achieve any meaningful consensus among all the stakeholders who have won the right to sit around the table when decisions are made. Faced with the choice of either relegating themselves to the role of advocates of one set of substantive standards or applying pragmatic theory to thirty years of policymaking, I think there is little question that Shapiro and Glicksman take the harder, more valuable path. The Achilles’ heel of strict cost-benefit ideology is its comprehensive rejection of existing law, partnered with its proponents’ inability to change the law democratically. Similarly, those on the opposite end of the spectrum, who advocate regulation without regard to costs when risks are severe enough, are stymied in their efforts to transform the law accordingly. Shapiro and Glicksman may well have their own personal views of what they would do if they could run the regulatory state without interference. Their insistence on examining the admittedly flawed, but nevertheless best available, deliberative process is grounded in history, more reliable in predicting the future, and far more difficult for either side to reject out of hand.

II. The Pragmatic Framework

Shapiro and Glicksman approach the job of explaining pragmatism in a historical context by first characterizing how Congress crafted the major

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33 See infra Section II.A.
34 Many scholars do not have this faith, and it produces an outright rejection of one of pragmatism’s threshold assumptions. See, e.g., David Hyman, Regulating Managed Care: What’s Wrong With a Patient Bill of Rights, 73 S. CAL. L. REV. 221 (2000) (expressing grave doubts about whether Congress is playing with a full deck when it legislates, or is instead reacting to unreliable anecdotal evidence to justify its whims and corrupt inclinations).
health and safety laws over the last few decades, and then teasing out the conceptual elements of that framework to give content to pragmatism's complex web. Since those elements are likely to be more interesting to readers not directly engaged in the feverish crusade to reform health and safety regulation, I will start with them.

A. Bounded Rationality

If Shapiro and Glicksman view pragmatism as a process that is open to all new ideas, how can they so immediately reject the monetization of benefits? Because, as the two remind us, "[i]n pragmatism, the value of a policy is dictated by its success under actual conditions rather than by its consistency with theoretical precepts." This tribute to the art of the possible is captured by the term "bounded rationality" throughout their book. Decisions based on the complex web of available information are inevitably limited (or bounded) by "time, resources, and cognitive constraints that make it virtually impossible to verify that the solution chosen is optimal." Thus, Shapiro and Glicksman argue, those who elevate monetized cost-benefit analysis to a determinative role in the regulatory process have ignored the fact that the phenomenon of bounded rationality makes it impossible to quantify either costs or benefits with precision. Some of the most compelling passages in Risk Regulation at Risk consist of painstaking and largely effective efforts to prove this point. Much of this analysis dissecting the flaws of strict cost-benefit analysis builds on the work of others, but Shapiro and Glicksman do such a good job of explaining these issues that their book should become a standard reference for those teaching these concepts.

Shapiro and Glicksman demonstrate that some prominent estimates of regulatory costs simply do not bother to include estimates of regulatory benefits, while others dismiss or discount benefits for ridiculously shallow reasons. They also explain the flaws of the ubiquitous tables
used to demonstrate the cost-per-life-saved of regulatory initiatives, first
developed by the Office of Management and Budget’s John Morral. Among other matters, Morral included regulations that had never been promulgated and discounted EPA and other agency estimates of lives saved by an arbitrary and unexplained ten percent.

But perhaps the most telling and relevant target of Shapiro and Glicksman’s critique of cost-benefit analysis is the work of Dr. John Graham, one of the best and brightest conservative economists, who now heads the Office of Information and Regulatory Affairs (“OIRA”) at the Office of Management and Budget (“OMB”). Dr. Graham has transformed OIRA into a tightly meshed screen through which all regulatory proposals, including those that are statutorily mandated, must pass. Indeed, the most acute symptom of the one-sided, invisible policymaking I described at the outset of this Review is that OIRA now requires that all agencies conduct strict cost-benefit analysis of new regulations, even when the statute mandating the agency to issue the regulation forbids that approach.

As Shapiro and Glicksman would concede, this approach is one way to reform regulation, although it does not balance offsetting social and cultural values, such as the sanctity of all human life. But is strict cost-benefit analysis superior to those other approaches solely from the perspective of how well it copes with bounded rationality? The apparent precision of the numbers generated by strict cost-benefit practitioners would indicate that they have the problems of bounded rationality solved. Shapiro and Glicksman beg to differ, in the process providing a crucial counter to the imposition of this misleading methodology.

For example, Dr. Graham is famous for his claim that some 60,000 statistical lives are lost because health and safety regulations target the

\[\text{figures included potential deaths from skin cancer and “it is quite possible that a cure will be developed.”}\]

\[\text{id. at 82-83. For a more complete analysis of Morral’s work, see Lisa Heinzerling, Regulatory Costs of Mythic Proportions, 107 YALE L.J. 1981 (1998).}\]


wrong risks and are overzealous. Shapiro and Glicksman explain that Graham bases this assertion on the methodology of “discounting” the benefits of regulations that prevent the development of long latency diseases. Discounting lies at the heart of the new transcendence of cost-benefit analysis precisely because Graham is in a position to enforce its application as the senior OMB official in charge of regulatory reviews. It is the single most powerful element of state-of-the-art cost-benefit analysis.

Discounting works in two steps. In the first, the value of a life saved is monetized, generally in the range of $3-7 million. Then, because benefits will not be achieved for many years, economists ask how much money we would need to invest today, at a “standard” discount rate, to come up with $3-7 million in twenty or thirty years’ time. Applying a typical discount rate of seven percent (according to OMB, the historical rate earned by private investments before taxes and inflation) produces benefit estimates that are a fraction of the original monetized figure, and can easily have the effect of reducing to insignificance lives lost to generations as yet unborn.

Pragmatism rejects discounting, monetization, and similar iterations of cost-benefit analysis for two distinct reasons. The first is that there are no foolproof and universally accepted assumptions that produce figures impervious to dispute. Unlike Farber, who accepts discounting and monetization as acceptable elements of pragmatism as long as we use a “high” estimate of a life’s value and a “low” discount rate, Shapiro and Glicksman insist that consciousness of bounded rationality dictates that we not use these elements at all.
B. Social Values

The second reason for relegating cost-benefit analysis to a subordinate role in regulatory decision-making is pragmatism’s commitment to the consideration of widely held social values. According to Shapiro and Glicksman, social values, such as the extraordinary importance most Americans attach to human life and the preservation of the natural environment, are indispensable to the formulation of pragmatic risk regulation because, without them, the designated solution will not serve all of the needs of the community.

For example, the going rate for a monetized human life in cost-benefit analysis is approximately $3-7 million. What American parents would accept that amount of money for their children’s lives or, for that matter, would not gladly spend that much to save their children if they had it available? Similarly, even if the economic benefits of mining in the Grand Canyon are enormous—enough to close the deficit or to finance the war against Iraq—few Americans would think the irretrievable sacrifice worth the short-term monetary windfall.

Conservative supporters of ubiquitous cost-benefit analysis would insist on monetizing the value of such benefits and offsetting that total against other possible investments. At the opposite end of the political spectrum, environmentalists would elevate these values above all others, refusing to accept that such benefits could be priced in a dispassionate and amoral manner. Pragmatists would consider these benefits important enough to justify discarding cost-benefit analysis as the arbiter of whether we regulate or not, even though they would also consider costs as another factor determining the outcome of a regulatory process.

A final social value incorporated in Shapiro and Glicksman’s version of pragmatism is a logical extension of the value Americans place on individual lives: the principle that degrees of protection should not depend on how much people are able to pay. Again, the widespread endorsement of this principle seems irrefutable. Americans would never explicitly endorse the notion that poor children or children of color should live in urban areas more heavily polluted by asthma-causing air pollution than their middle class, white counterparts, whose parents can afford to retreat to the suburbs. However willing people are to avert their eyes from social inequities and the suffering of lower classes, and however willing they are to blame adults for their own economic and social circumstances, Americans believe that every child deserves an equal chance at success in life.

48 Like Shapiro and Glicksman, I intend the adjective “social” to include cultural and moral values as well as social mores and conventions. RISK REGULATION AT RISK, supra note 2, at 20.

49 Id. at 55.
Pragmatic Regulation in Dangerous Times

Surprisingly, some influential conservatives explicitly reject this value, arguing that environmental quality is a "luxury good" that should be available only to those able to afford it. Equally chilling is the related argument that because the poor and uneducated earn less money, exporting pollution to Third World countries makes sense because it will cost less than keeping the pollution where it is generated, in a better-educated and higher-salaried world. While some advocates of cost-benefit analysis would not go nearly this far, monetization of benefits makes it far more difficult to take the equity principle into account. Mainstream economists do not explicitly assign different values to people on the basis of race or gender, to be sure. But their calculations of costs and benefits fail to consider whether all lives are at equal risk, and, if they are not, what should be done to remedy that discrimination.

C. The Role of Cost

Despite their obvious disdain for the rigid and misleadingly precise application of cost-benefit analysis, Shapiro and Glicksman are at understandable pains to distance themselves from the notion that costs should play no, or even a distinctly subordinate, role in determining regulatory outcomes. After all, they observe, economic efficiency is also an important social value, albeit one that often conflicts with more idealistic conceptions. They recognize the validity of cost considerations.

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50 See, e.g., P.J. O'ROURKE, ALL THE TROUBLE IN THE WORLD 201 (1994) ("Neither is a 'clean environment' a political right of humans. Rights must be free . . . . You have the right to bear arms. You don't have the right to take a gun without paying for it. Pollution control is not free. . . . The environment turns out to be the 'luxury good' that Cato Institute's Jerry Taylor said it was."); Making the Poor Pay for Pollution, WASH. TIMES, Sept. 20, 1993, at A22 ("A squeaky-clean environment is something of a luxury, one that is hard for the poor and minorities to afford.").

51 No lesser a public figure than Lawrence Summers, then chief economist of the World Bank, made this very argument in writing in 1992. RISK REGULATION AT RISK, supra note 2, at 56-57 (citing Let Them Eat Pollution, ECONOMIST, Feb. 8, 1992, at 66). The full quote is: "[The] economic logic of dumping a load of toxic waste in the lowest-wage country is impeccable."

52 The one caveat to this generalization is the growing use of "quality-adjusted life years," or "QALYs." This methodology does not award a single monetary value to a "whole" life (e.g., $6 million per person). Rather, it attempts to parse the quality of life experience by each person on a yearly basis. Thus, a year in the life of old, ill people would be worth less than a year in the life of a strong, healthy 20-year-old. If taken to logical extremes, QALYs could easily have the result of discriminating on the basis of race, class, gender, and age in the context of health and safety regulation. For a more extensive critique of QALYs, see News Release, Proposed New Regulatory Rules Overlook Preferences of Elderly and Ill (Mar. 20, 2002), available at http://www.rff.org/news/releases/overlookpreferenceselderlyill.htm (last visited Feb. 24, 2003); and ERIK NORD, COST-VALUE ANALYSIS IN HEALTH CARE: MAKING SENSE OUT OF QALYS (1999).

53 The lives of people of color from low-income neighborhoods are at greater risk because they bear a greater pollution burden than those living in more affluent areas.

54 RISK REGULATION AT RISK, supra note 2, at 22. Perhaps the most obvious fertile ground for the discovery of examples of such conflicts is the fitful and emotional debate over rationing health care.
both in determining whether to regulate and, once that decision is made, in
deciding how to go about controlling pollution or enhancing safety.

If costs should not trump regulation, just where do they fit in? Risk
Regulation at Risk suggests that Congress has responded to pressure from
conservative cost-benefit purists by imposing analytical requirements on
regulators without going so far as to change the core statutes that relegate
cost considerations to one among many decision-making factors. The
result is the erection of so many hurdles to the promulgation of rules that
contemporary rulemaking is "ossified," to use the famous term popularized
by Professor Thomas McGarity. This outcome is itself economically
inefficient and surely does not result in more thoughtful considerations of
cost.\footnote{55 Thomas O. McGarity, Some Thoughts on "Deossifying" the Rulemaking Process, 41
DUKE L.J. 1385 (1992).} To remedy this unfortunate state of affairs, Shapiro and Glicksman
urge that Congress clear the underbrush of these mindless procedural
requirements by acting on the reliable assumption that agencies operating
under the existing statutory framework will inevitably consider costs when
making decisions.

Shapiro and Glicksman readily admit that the breed of pragmatism
they find reflected in current law results in decision-making that reflects
the "messy realities" of the "world in which we live," defying efforts to
draw a neat, quantitative decision tree.\footnote{56 RISK REGULATION AT RISK, supra note 2, at 71.}
They deny that the complexity of simultaneously considering a multiplicity of factors drawn from different
disciplines (philosophy, law, economics, sociology) is either irrational or
debilitating.\footnote{57 Id. at 71-72.} Society must know approximately how much it must pay for
protection, and then make the decision whether to purchase that protection
on the basis of non-economic values. There is a role for qualitative
descriptions of cost; indeed, bounded rationality indicates that such
descriptions may be the best we can do.

Conservatives are unlikely to be satisfied by this recommendation
and, as a pragmatic matter, will almost certainly not relinquish analytic
requirements, such as compulsory monetization of costs and benefits,
without alternative controls on career regulators who may run amok under
future administrations. Calls for reform to combat ossification are
therefore likely to be non-starters in the real world for the foreseeable
future. By the same token, core statutory standards are also likely to
remain unchanged, placing conservatives in a similar dilemma. Analytic
requirements are the most important tool wielded by conservative
economists in government. However, without changes in the statutory
core, even conservative judges find it difficult to intervene when reviewing
the substance of regulation, and they become relegated to the role of checking to ensure that certain pieces of paper appear in the docket.  

D. Prevention Versus Compensation

The final building block of pragmatism worth noting in the truncated format of this Review is Shapiro and Glicksman’s view on the important topic of scientific uncertainty. Here, by shifting the starting point of their analysis backwards in time to the genesis of congressional activism in the health and safety regulatory arena, the two make a useful contribution to a subject that has become as contentious as it is bewildering.

Shapiro and Glicksman begin by recounting the “themes of the 1960s,” the most important of which for their purposes is “public interest liberal[ism].” This particular “ism,” they say, was a major plank in the platform supporting the social movement that motivated Congress to pass the first, all-important generation of health and safety laws. This movement was founded on the premise that government should define “collective social values” (e.g., civil rights, consumer protection, worker safety, and environmental protection) and should pass laws to enable society as a whole to achieve goals consistent with those values (e.g., desegregated schools, fair trade practices, a safe workplace, clean water, and clean air). The operation of private markets and the activities of the private sector, especially corporations, would not be allowed to frustrate those goals.

The central idea that permitted the law to rotate 180 degrees in order to accommodate this new approach was that it was not enough to compensate the victims of the market’s operation or of corporate behavior, as the tort system up until that point had done. Instead, Congress geared an entire generation of laws toward preventing injury. This explanation of the genesis of health and safety law contends that Congress not only understood but also accepted the problem of scientific uncertainty, and that it codified the concept that truth-seeking groups need to make decisions without definitive scientific confirmation. That approach is the essence of pragmatism, which recognizes that quests for objective truth are, in the vast majority of cases, quixotic. Scientific uncertainty regarding such fundamental issues as the mechanism that causes cancer or the toxic characteristics of common chemicals makes it admittedly more difficult to reach agreement on whether to take regulatory action. However, Shapiro

59 RISK REGULATION AT RISK, supra note 2, at 4-5.
60 Id. at 53.
and Glicksman invoke history to demonstrate that the "democratically organized, truth-seeking group of independent thinkers" who wrote these laws intended exactly that result, not by default, but as an affirmative choice.

To gauge the implications of this shift, consider the conservative view on scientific uncertainty, which is that we should not act until science has a reliable, if not quite definitive, answer linking a hazardous substance or practice to a public health or environmental harm. Not only does this approach shift the heavy burden of justifying regulation onto the shoulder of its proponents, but it also sets up science as the ultimate arbiter of whether to act. In this context, science is viewed as a discipline that must save the irrational human race from itself, allowing us to sidestep uncomfortable confrontations with softer, emotional, and therefore wasteful social and moral values.

Shapiro and Glicksman do not try to finesse their rejection of this cooler, more "rational" approach. Pragmatism, they remind us, cannot be controlled exclusively by science, which, like economics, is but one among many factors that must be considered. Because the body politic has consciously rejected the tort law approach of paying people after-the-fact in favor of a policy of prevention, in a world of bounded rationality, scientific uncertainties must be weighed along with all of the other elements considered valid in a "messy" real world.

Before leaving this subject, it is worth noting that advocates of strict cost-benefit analysis should be the first to denounce the economic inefficiency of the traditional tort system, given its (1) very high transaction costs; (2) erratic and inadequate compensation patterns; (3) irrationality when administered by lay juries, especially with respect to their susceptibility to "junk" science; and (4) tendency to chill technological innovation by unduly frightening corporations. Since only the most committed devotees of the free market are likely to suggest that we absolutely refuse to compensate the injured, some sort of "no fault" system would appear to be the only alternative to the preventative system we have now.

III. What Congress Did

Shapiro and Glicksman argue that Congress has overwhelmingly rejected a cost-benefit test for making regulatory decisions because it recognized the constraints posed by bounded rationality and was committed to establishing a system that would not allow the lack of some

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61 For a concise statement of the conservative position that we should not regulate until fundamental scientific uncertainty is resolved, see Gail Chamley & E. Donald Elliott, Risk Versus Precaution: Environmental Law and Public Health Protection, 32 ENVTL. L. REP. 10363 (2002).
types of information to defeat its overall preventative goals. In a truly
irresistible siren call to the haggard student of health and safety regulation,
they reduce thousands of pages of statutes and their implementing
regulations to two central concepts. First, each statute has a “trigger”
defining the “evidentiary burden” an agency must meet in order to regulate
a toxic substance or other hazard. Second, each statute sets forth a
standard giving agencies guidance on how it should evaluate costs,
benefits, and all of the other factors that seem relevant in a pragmatic
framework.

There are four categories of statutory triggers that determine whether
agencies can regulate, listed below in escalating order of the burden they
impose on the regulator:

1. **no threshold**—empowering the agency to regulate as soon as a
carcinogen is introduced into the environment.

2. **risk-based threshold**—instructing agencies to regulate if and when
the public or the environment is exposed at levels that are
“potentially dangerous.” This is where most of the action is in
the environmental arena.

3. **significant risk threshold**—permitting agency action only when
exposure at potentially dangerous levels is “unacceptable.”

4. **unreasonable risk threshold**—allowing agency action only when
the risk is “unreasonable” in the sense that its “human or
environmental costs” are “not justified by the economic and social
benefits it yields.”

There are five categories of statutory standards that determine how
agencies may regulate, presented below in escalating order of how much
they require agencies to balance costs and benefits:

1. **risk or ambient quality-based**—regulation must either protect
against a designated risk (e.g., reduce pollution to safe levels) or
achieve an environmental goal (e.g., clean water).

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62 RISK REGULATION AT RISK, supra note 2, at 32, 72.
63 Id. at 33-45.
64 Id.
65 Id. at 33.
66 Id.
67 Id. at 34.
68 Id.
69 Id. at 35-36.
2. *phaseout*—Congress itself decides to eliminate a product, although often over a long lead time (e.g., chlorofluorocarbons).\(^70\)

3. *constrained balancing*—Congress itself does the threshold balancing of costs and benefits, as when it instructs agencies to list technologies meeting some statutory standard (e.g., “best available” or “reasonable available”).\(^71\)

4. *open-ended balancing*—Congress instructs the agency to consider costs, but leaves it up to agency discretion when and how much to do so.

5. *cost-benefit standard*—Congress instructs the agency to “directly compare the relationship between regulatory costs and benefits.”\(^72\)

What Shapiro and Glicksman call the “matching” of specific triggers with specific standards is the action that determines the substantive content of regulations.\(^73\) The most permissive and therefore aggressive statutory regimes allow agencies to meet the relatively light burden imposed by a “no threshold” trigger in deciding whether to regulate, and instruct them to develop “risk or ambient quality-based standards” when they do. At the opposite end of the spectrum, restrictive statutory regimes require a finding of “unreasonable risk” to trigger action, followed by the application of a “cost-benefit standard” in determining the content of regulatory requirements.\(^74\)

I have no quarrel with the taxonomy laid out so clearly in *Risk Regulation at Risk*. One could develop other systems and other labels, but this one is clear and logical without being so elaborate as to frustrate everyday use. If there is a problem with this analysis, it is the need the reader feels to pursue these issues further, examining how the standards have played out in the real world. The book is ambitious as it is, and it is unfair to expect it to be several books in one. One can only hope that Shapiro and Glicksman will soon pick up where they left off, giving us a fully developed vision of the past as prologue to the future.

\(^70\) Id. at 36.
\(^71\) Id. at 39. This category has produced among the most remarkable regulatory successes, and deserves further application in other contexts.
\(^72\) Id. at 39-40.
\(^73\) Id. at 40.
\(^74\) Id. at 40-41.
IV. The Agony of Implementation

When Shapiro and Glicksman, or others with similar points of view, begin to write a follow-up book, they will inevitably face the agonizing reality that, like many areas of law, there is much "slippage" between what Congress says and what agencies do in the health and safety regulatory arena. Shapiro and Glicksman make a convincing case that it is both anti-democratic and misguided for OMB to use its power to instruct federal agencies to perform strict cost-benefit analyses regardless of what their authorizing statutes say. But these problems pale in comparison to the desperate under-funding of federal and state agencies, a situation that is just as subversive of congressional intent.

For example, EPA’s effective purchasing power has risen no more than fifteen percent since 1980, before Congress passed the 1990 Clean Air Act Amendments and a slew of other major reauthorizations. Most states face staggering funding deficits. Confronted with the prospect of throwing families into the streets and cutting off medical care, it is hard to imagine too many governors choosing to provide significant monies to environmental and other health and safety agencies. The upshot is that federal and state regulators either do not act, or act as best they can in the face of resource constraints, gaps in information, and ferocious resistance to regulation by affected industries.

Hollowness of government, or the related malady of agency capture, may also explain the other interesting and important real-world failures of statutes that encourage regulation without much regard for costs. As Shapiro and Glicksman acknowledge, EPA’s inability to regulate air toxics under the original Section 112 of the Clean Air Act demonstrates the administrative paralysis that can result from this approach. Agencies simply do not have the political will or the physical wherewithal to impose and enforce regulatory requirements that could lead to substantial economic disruption.

75 For an insightful and original exposition of this phenomenon, see Daniel Farber, Taking Slippage Seriously: Noncompliance and Creative Compliance in Environmental Law, 23 HARV. ENVTL. L. REV. 297 (1999).
76 See RISK REGULATION AT RISK, supra note 2, at 178-83.
77 Rena I. Steinzor & William F. Piermattei, Reinventing Environmental Regulation via the Government Performance and Results Act: Where’s the Money?, 28 ENVTL. L. REP. 10563, 10567 Fig.1 (1998) (charting EPA’s actual purchasing power over two decades).
79 These problems are related because overworked and under-funded bureaucrats are more easily overwhelmed by squadrons of industry experts.
80 RISK REGULATION AT RISK, supra note 2, at 41-42, 191-92. The original law adopted a permissive trigger and a risk or ambient quality-based standard for such pollutants. After two decades of paralysis, Congress amended the Act in 1990 to require the adoption of technology-based controls.
Shapiro and Glicksman might well retort that what I have just described are outcomes anticipated by pragmatists. The ultimate question is when "democratically organized, truth-seeking group[s] of independent thinkers"\(^8\) will return to the important task of statutory design, and what alternatives they will develop in light of these realities.

V. Future Directions

Although their consideration of future steps is much abbreviated, Shapiro and Glicksman offer some intriguing proposals to reopen the debate on how to accomplish suitably pragmatic regulatory reform. The two urge that what the existing system needs most is the ability to engage in frequent, mid-course corrections—what they call "back-end adjustments"—that update and upgrade regulation as new information comes in.\(^8\) One vehicle for this kind of approach is to give agencies ample discretion to grant waivers or variances from overly rigorous regulatory requirements. Another is to institutionalize the negotiation of alternative solutions on a case-by-case or facility-by-facility basis, as was done, the authors note approvingly, in EPA’s troubled reinvention experiment, Project XL.\(^8\)

The Clinton Administration launched Project XL (standing for "eXcellence and Leadership") in May 1995 in an effort to give regulated entities the opportunity to propose site-specific, alternative compliance plans that waive existing regulatory requirements in favor of more economically efficient ways of addressing pollution problems.\(^4\) Project XL did not mandate a universe of specific alternative approaches, instead depending on regulated entities to submit specific proposals. The voluntary nature of these efforts was their defining characteristic because it meant that without industry cooperation, reinvention could not proceed. Ultimately, efforts to negotiate and implement such agreements without clear guidance on regulatory prerequisites made site-specific transaction costs very high, discouraging further industry participation.\(^5\)

Shapiro and Glicksman recognize these dangers, acknowledging that, unless back-end adjustments are "appropriately structured and constrained," they could "threaten the integrity of the regulatory program"

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\(^8\) Id. at 16.
\(^8\) Id. at 161-77.
\(^8\) Id. at 164-66.
\(^5\) I should admit to strong opinions on this particular subject. See Rena I. Steinzor, Reinventing Environmental Regulation: The Dangerous Journey from Command to Self-Control, 22 Harv. Envtl. L. Rev. 103, 123-50 (1998) (evaluating Project XL and concluding that its transaction costs were far too high for the benefits it promised to government, industry, and public interest stakeholders).
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by rendering regulatory policy "incoherent." Nevertheless, it is difficult to argue with their fundamental premise that the existing regulatory system has become unduly rigid. This characteristic is, after all, the flip side of ossification. Once regulators have given birth to a rule, following an arduous and painful labor, it is human nature for them to resist further tinkering. No doubt, the regulatory flexibility offered by Project XL could be redesigned and reinvigorated, preferably by Congress. As recent history demonstrates, however, accomplishing this redesign in a balanced, pragmatic way will require significant effort.

Of course, one cannot simply decree the end to this resistance, as it arises from complex and difficult issues of institutional credibility and performance. As Professor Richard Lazarus explained in his article The Tragedy of Distrust in the Implementation of Federal Environmental Law, a piece that has become a virtual classic in the administrative law and policy literature, battered agencies like EPA have enough trouble getting up in the morning, figuratively speaking, to preside over salons that require them to reinvent themselves in the afternoon. Shapiro and Glicksman close their remarkable book by tackling this subject, arguing that it should be the ground zero for appropriate reform. They note that an expert bureaucracy, operating within "a critical community of inquiry" that "specializes in the scientific and policy details of risk regulation science" is ideal from a pragmatic perspective. Of course, they hasten to add, this "comparative advantage" does not "justify ignoring the role of democratic accountability as a cherished tradition in this country." Unfortunately, they conclude, EPA and other health and safety agencies are not so much held accountable as badgered into dysfunction by Congress, other elements of the executive branch, and the courts. The refusal of these entities to defer to agency expertise and to recognize the "bounded rationality" that affects all human judgments has resulted in the use of such extraordinarily destructive tools as excessive presidential review and the appropriations rider to defeat pragmatic policymaking.

To counteract these outcomes, Shapiro and Glicksman offer advice to each of the interfering branches of government. They recommend that presidential oversight through OMB focus on setting a regulatory agenda and coordinating regulatory decisions that affect more than one agency or department. They suggest that Congress pass statutory amendments, not riders, and that it recognize the burden and expense of implementing such

86 Risk Regulation at Risk, supra note 2, at 172.
88 Risk Regulation at Risk, supra note 2, at 179.
89 Id.
90 Id. at 179-205.
91 Id. at 184.
instructions by adequately funding health and safety regulatory agencies.\(^\text{92}\) Finally, they urge the courts to adopt "pass/fail" review for agency decisions that depend on technical expertise, rather than the intrusive second-guessing that has occurred in such troubling instances as the D.C. Circuit's decision to invalidate EPA regulations to control fine particulates and ozone under the Clean Air Act, a decision that was promptly overturned by a unanimous Supreme Court.\(^\text{93}\)

Shapiro and Glicksman understandably run out of space to prescribe a plan for achieving such changes. The book also ends before it can make a convincing case why those who have profited in the short-term from erratic and misguided oversight have much to gain over the long run from their suggestions for "pragmatizing" these processes. Yet what Risk Regulation at Risk does offer us is a staging area for further discussion.

Conclusion

Despite the nation's unification behind president Bush in the wake of the September 11, 2001 attacks, there are signs that the polarization so evident after the 2002 election is returning to domestic politics with a vengeance.\(^\text{94}\) Congress remains gridlocked on domestic issues large and small. The federal budget has become such a contentious battleground that continuing resolutions are routine. Passing substantive legislation through the budget and appropriations process is the last resort of interest groups disgusted by the paralysis of authorizing committees. With all these symptoms of legislative dysfunction, it is reasonable to wonder whether Congress will ever again prove capable of engaging in the marathon sessions that were necessary to rewrite major statutes like the Clean Air Act.

It is no small irony that the assault on health and safety regulation is motivated by laws written in the wake of another war, manifesting the social and cultural upheaval spawned by America's defeat in Vietnam. Over the course of two decades, with the height of activism roughly in the middle of this period, Congress enacted some of the most powerful statutes in the country's history. Agencies were created to implement these laws, and tens of thousands of people became engaged in the effort to write a massive number of regulations, tasking the courts as never before with the difficult job of second-guessing the bureaucracy.

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\(^{92}\) Id. at 191.

\(^{93}\) Id. at 193-97 (explaining "pass/fail" review); Id. at 199-200 (discussing the American Trucking decisions). For the full text of those opinions, see American Trucking Ass'ns v. Browner, 175 F.3d 1027 (D.C. Cir. 1999), modified on rehearing, 195 F.3d 4 (D.C. Cir. 1999) reversed sub nom. Whitman v. American Trucking Ass'ns, 531 U.S. 457 (2001).

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It is understandable that, as the world grows closer through technology and economic interdependence, the nation must focus on defining its appropriate international role. The world is a dangerous place that rightfully commands the lion's share of our time and attention. We should not make the mistake of concluding, however, that it is acceptable to ignore either domestic issues or the political bodies we have elected to resolve them. The most insidious undercurrent in the debate over risk regulation is the assumption that Congress wrote laws with "irrational" consequences and that it is acceptable to rectify these embarrassing excesses behind closed doors. The great contribution of Risk Regulation at Risk is to explain what Congress did, and, in the process, to bring conflicting values and hard choices back into public view.