

Sophisticated Sabotage: The Intellectual Games Used to Subvert Responsible Regulation

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Introduction

In the 1960s and early 1970s, when a series of environmental, workplace, and consumer disasters came to public attention, there was little question that Congress and the American people regarded them as outrageous tragedies. The public was shocked to learn that Lake Erie and several other bodies of water were considered ecologically "dead." In workplaces, dangerous chemicals were making thousands of people sterile. Chronic noise was rendering workers deaf. Poorly designed factory equipment was severing fingers and limbs. General Motors was castigated by U.S. senators for spending only \$1 million of its \$1.7 billion in 1964 profits for external automobile accident research — even as millions of Americans were being injured and killed by dangerous automotive designs and manufacturing defects.

Since the 1970s, regulation has succeeded in mitigating many of the previous types of hazards. Aggregate emissions of six principal pollutants regulated under the Clean Air Act (CAA) have been cut by 48 percent even as economic activity has increased 164 percent.[1] Between 1982 and 2002, there was a 93 percent reduction in lead emissions, which can cause brain damage and mental retardation in children.[2] The level of ozone-depleting chemicals in the lower atmosphere has declined by between 14 and 22 percent over the last 20 years,[3] a trend that will help protect humans and plant life from harmful radiation. Scientific evidence also indicates that the rate of ozone depletion in the upper atmosphere is slowing.[4]

Regulation under the Clean Water Act prevents the release of 700 billion pounds of water pollutants each year, including toxic pollutants known to cause or to contribute to cancer, liver and kidney damage, and problems in mental and motor development in children.[5] In 2001, deaths from motor vehicle crashes hit a new historical low of 1.52 persons killed per 100 million vehicle miles traveled.[6] In America's workplaces, too, fewer people were injured or killed on the job.[7]

This remarkable progress does not mean that the challenge of protecting people and the environment from preventable harms is nearly finished. The U.S. Environmental Protection Agency (EPA) estimates that 146 million people live in areas that are not in compliance with health-based CAA standards and are therefore exposed to harmful levels of air pollution.[8] Thousands of power plants and large industrial facilities still emit high levels of sulfur dioxides, which can cause permanent lung damage, and high levels of mercury, which can cause brain and kidney damage and birth defects.[9] In New Jersey alone, air pollution from trucks and automobiles is related each year to the premature deaths of 2,300 to 4,500 residents, 7,800 to 15,000 respiratory and heart-related hospital admissions, 170,000 asthma attacks in kids and 600,000 missed school days because of pollution-related illnesses.[10] The increasing effects of global warming threaten cataclysmic climate changes for millions of persons.[11] Although 31 countries have banned asbestos on the ground that there is no safe level of exposure, the United States imports about 30 million pounds of asbestos each

year.[12] One result is that mechanics who install replacement brakes are routinely exposed to asbestos in their jobs and have received no protection from the Occupational Safety and Health Administration (OSHA).[13] EPA estimates that 40 percent of our streams, 45 percent of our lakes, and one-half of our estuaries are not clean enough or healthy enough to support fishing, swimming, water supply, and protection of fish and wildlife.[14] The National Highway Traffic Safety Administration (NHTSA) reports that over 42,000 people died in vehicle traffic accidents in 2001 and another 3 million were injured.[15] The U.S. Department of Labor reports that nearly 6,000 workers lost their lives in workplace accidents in 2001,[16] and there were 5.2 million work-related injuries and illnesses.[17]

Despite these and many other significant risks, the Bush Administration is actively involved in dozens of initiatives to reduce existing protection of people and the environment. It has proposed to exempt indefinitely power plants and other large facilities that currently do not have to comply with the CAA,[18] a move that will cause an estimated 20,000 premature deaths, 400,000 asthma attacks, and 12,000 cases of chronic bronchitis.[19] President George W. Bush has repudiated the 1997 Kyoto Protocol, an agreement between the United States and other industrialized nations to address the causes of global warming, and the Administration has not yet proposed any plan for addressing this issue.[20] The NHTSA rejected a regulation developed under the Clinton Administration that would have required car manufacturers to install monitors that would notify drivers if their tires were dangerously low in favor of a system that would, by the agency's own data, prevent only about one-half as many deaths and injuries. [21] EPA adopted a watered-down version of a regulation proposed in the Clinton Administration to reduce the extent to which our streams and rivers are polluted by the 220 billion gallons of liquefied manure produced each year by large factory farms.[22] The U.S. Department of Energy withdrew efficiency standards established by the Clinton Administration for air conditioners and heat pumps with the intention of proposing weaker regulations.[23] After Congress rejected a Clinton Administration proposal to regulate ergonomic injuries among workers even though such injuries result in 70 million physician office visits each year and result in between \$45 and \$54 million dollars annually in compensation costs, lost wages, and lost productivity,[24] OSHA announced that it will rely on the voluntary compliance by employers.[25]

Most of the actions cited here were taken by agencies at the behest of the Office of Management and Budget (OMB), the executive branch overseer of the regulatory process. OMB has also pressured EPA to exempt firms that emit hazardous air pollutants from compliance with the CAA[26]; weaken rules that would prevent runoff from construction sites that contaminates our water supplies; weaken water pollution rules for power plants that would protect trillions of fish; and reduce the pollution caused by snowmobile emissions.[27]

In addition to weakening existing regulatory standards, the Bush Administration lags far behind previous administrations in proposing and issuing new regulatory protections. The government keeps track of the number of "significant regulations" — generally the most important regulations adopted by the government. In President William J. Clinton's first two years, EPA finalized 23 new rules; in the first years of the first President Bush's Administration, EPA finalized 14 new rules. In the current President Bush's first two years, EPA completed only two significant regulations.[28] The Department of Health and Human Services did not finish a single significant regulation in the current Bush Administration's

first two years. The U.S. Department of the Interior produced only two significant regulations. OSHA managed to get out one regulation, but it involved deregulation.[29]

The government has also been delinquent in enforcing the regulations that are currently on the books. Under the Bush Administration, EPA has devoted less staff to inspection and enforcement than at any time since the Agency was established.[30] Not surprisingly, EPA is catching and punishing fewer polluters than the two previous administrations.[31] Since January 2001, the average number of violation notices issued each month by EPA has dropped 58 percent over the average number issued by the Clinton Administration.[32]

Despite these trends, the president's 2003 budget sought to eliminate the positions of over 200 enforcement personnel.[33] OSHA typically inspects fewer than 1 percent of all workplaces annually, but the Bush Administration has conducted even fewer inspections than the Clinton Administration.[34] The president's 2003 budget proposed to cut OSHA by \$9 million, thereby eliminating 64 full-time enforcement positions.[35]

Most of these actions have gone unnoticed by the news media and the general public. While these egregious, preventable harms are no less threatening than the ones that first sparked public outrage and government reform in the 1970s, public perception has shifted dramatically. We now see these harms in different terms.

Over the past generation, regulated industries have succeeded in inventing and popularizing a new, revisionist language about regulation. This language is ostensibly about improving the quality of regulatory decisionmaking. In truth, its chief goal is to discredit and stymie federal regulation while defending the economic interests and power of corporate investors and management. The language deliberately shifts the political terms of debate away from the morally charged terrain of human tragedy and corporate blame, substituting in its stead an impersonal, "objective" lexicon of economic and statistical analysis.

Novelist Milan Kundera once warned that "the struggle of man against power is the struggle of memory against forgetting." Which facts and interpretations shall we choose to remember — and which shall we forget, substituting in their place a more congenial, sanitized story? This is the unstated, but absolutely critical question of health, safety, and environmental regulation today. Shall we remember the terrible diseases, injuries, and fatalities that unsupervised businesses tend to inflict on workers, consumers, the public, and nature? Or shall we instead see such tragedies through the lens of economic abstractions and learn to forget some harsh truths?

The new lexicon that regulated industries have cultivated is all about forgetting. It essentially says that the hazards facing consumers, workers, and the environment are not really so bad. Government regulation long ago solved the important health, safety, and environmental problems. The real problem now is government regulation itself. Regulation, we are told, poses a fundamental threat to our "freedom to choose." It represents a left-wing attack on the "free market" by a "new class" of journalists, academics, and public interest advocates based on "junk science."

Regulation was originally the story of expanding people's freedoms, of course. By helping to prevent life-threatening illnesses and hazards, Americans could enjoy freedom from cancer-

causing consumer products, defective tires, unsafe factory equipment, pesticide-tainted drinking water, among many other unnecessary hazards.

In the hands of the regulated industries and the stable of academics they fund, however, the story of regulation has been twisted into a story about a relentless and irrational economic attack on efficiency. Regulation is portrayed as a subversive, prosperity-destroying crusade against the free market and as a paternalistic intrusion on our personal freedoms.

In this new discourse, questions of responsibility for harm strangely disappear. The demonstrated concerns of the public are dismissed as misguided. The legislative policies endorsed by Congress fade into the background. According to the new language, such concerns are subjective, anecdotal, and fuzzy-minded. Who can measure a social value? Surely something as consequential as regulation, goes the new story, should not be based on the pathetically misinformed opinions of the American people or the self-serving political agendas of bureaucrats. If it is to be responsible, regulation ought to be wholly "rational" and "objective." It ought to be based on hard statistics and economic analyses. This means that recognized experts in risk assessment and cost-benefit analysis — not mere citizens, legislators, or bureaucrats — should determine whether and how to regulate.

The shift in the predominant language used for understanding regulation represents a remarkable political coup. It represents the triumph of a bland, numbers-driven vocabulary that is well-suited for concealing the rogue effects of unfettered markets.

The rise of this framework is no accident, of course. It is a case of sophisticated sabotage. Over the past generation, dozens of major corporations and right-wing foundations have spent millions of dollars to develop a respectable oeuvre of antiregulatory research. The engine of this "sponsored scholarship" is a well-funded apparatus of Washington think tanks, university centers, endowed professorships, and research projects. Prominent Washington players include the Heritage Foundation, the American Enterprise Institute, the Cato Institute, and the Competitive Enterprise Institute, but there are university centers such as the Harvard Center for Risk Effectiveness and the Center for the Study of American Business at Washington University in St. Louis.

While the literature turned out by the think tanks and centers purports to be disinterested, the conclusions are seldom disappointing to its financial backers: automakers, steel companies, pharmaceutical companies, chemical companies, and activist-minded conservative foundations.[36] Notwithstanding its academic trappings, the literature produced by these various entities has little to do with improving health, safety, and environmental protections for Americans.

The point of *Sophisticated Sabotage* is to reveal the profound intellectual deficiencies of this literature. It is to expose and explain the disingenuous assumptions, suspicious numbers and fallacious inferences of quantitative risk assessment, cost-benefit analysis, and other analytic tools. This book seeks to showcase the many problematic intellectual concepts that regulated industries and their intellectual allies have invented and refined. In order to argue against regulation, many analysts, for example, rely on such dubious techniques as "revealed preferences" (What would you pay to be safe from a given hazard?) and "quality-adjusted

life-years" saved, or QALY (What dollar sum shall we put on an improved quality of life at any given stage of that life?).

While some of these tools, properly employed, have an appropriate place in regulation, most of them have serious conceptual flaws or rely upon very slippery empirical data. Analytic models that may be theoretically sound turn out to be impossible to implement properly. No matter. Cynical politicians and recalcitrant industries find it immensely valuable to use the questionable numbers prepared by shoddy analytic models to rally political opposition to regulation.

Sophisticated sabotage is the only appropriate term for these complicated academic methodologies because at bottom, they are intellectual games supported by opponents of government regulation to stymie responsible regulation. These foundations and corporations seek to rewrite the actual history of the laissez-faire market and smother its output of human tragedy with bland, benign abstractions. The new language is an attempt to redefine the meaning of regulation so that the chief concern is no longer the moral grievances and physical harm of victims, but the economic priorities of industry. As Prof. Jay Michaelson writes in one excerpt below, the economic framework reverses the burden of proof; it "coerces individuals to give up their right to live because another private actor wishes to make a profit."

The end-goal of sophisticated sabotage is to make the new language for discussing regulation so utterly pervasive, uncontested, and "normal" that its terms become the primary reference points of debate. Alternative ways of coming to regulatory judgments become nearly impossible to imagine. Making "sound science" and laissez-faire economics the normative discourse for regulation has the intended effect of inducing a sort of social amnesia. Ensnared in economic categories, we forget about the injustices and tragedies that animated regulation in the first place. What matters now, in the regulatory Newspeak, is how industry is being hurt.

Monkey-Wrenching the Regulatory Process

The anatomy of forgetting is complex. It is not easy to change the "attention frame" for understanding regulation. Serious hazards and catastrophes cannot simply be swept under the rug. The presence of mad cows, dead bodies, and diseased people must somehow be explained. Corporate involvement in such tragedies must be justified — or it will be indicted. Over the past generation, regulated industries and right-wing foundations have developed some shrewd and highly effective strategies: don the guise of "sound science" and insist that hard numbers be the basis for any new regulation. Speak as if the real issue in regulatory disputes is economics, not the public health. Depict advocates of regulation as irrational sensationalists who traffic in "junk science." Denigrate the knowledge and participation of the public, and celebrate the expertise of economists and credentialed academics.

Responsible regulation necessarily requires a lot of technical expertise and analysis. This provides a crucial opening for the sophisticated saboteur intent on intellectual mischief. For example, by generating a large amount of quantitative data and analysis — material that is impenetrable to the layperson and too boring for the mainstream press to investigate — the sophisticated saboteur can "monkey-wrench" the regulatory process by requiring gratuitous

mandatory studies. The predictable result: new procedures, research, and court challenges that delay government action for years, saving the relevant industry millions of dollars.

The saboteur has a larger ambition, however: to commandeer regulatory debate and change the normative metrics for decisionmaking. This is especially strategic. Rather than having to fight one regulatory proposal after another, industry can secure a more enduring polemical advantage (and favorable political outcomes) by changing the accepted categories for carrying on regulatory discussion. That is exactly what has happened over the past generation.

Sophisticated Sabotage probes the mendacious mindset of this fairly obscure but highly influential antiregulatory literature. It seeks to identify and deconstruct the many flawed analytic models that business interests have developed and forced regulatory agencies to use. It shows how these models privilege the economic freedoms of industry while delegitimizing regulatory policies based upon moral equity, social policy, and non-economic criteria. By relentless promotion of this new discourse, the statutory intent of Congress has been marginalized and new, business-friendly decisionmaking norms have been installed in its place. The political objectives of the new norms are ingeniously camouflaged by the trappings of scholarly objectivity. The literature purports to be "beyond politics" and controversy, its interpretations wholly neutral. Political partisans find this immensely useful because they can then wave the "objective scholarship" of their intellectual confederates in front of the press and the public.

What neither the press, the public, nor even many members of Congress may realize is that there is, in fact, a robust scholarly literature that vigorously challenges the sponsored scholarship of regulated industries. This book draws upon the large body of dissenting literature to explain the intellectual deceptions and political motivations of the many antiregulatory sub-disciplines. While the complexities of cost-benefit analysis, quantitative risk assessment, and other analytic tools can be technical and arcane, they can be decisive in determining regulatory outcomes. It is therefore important to understand precisely how these tools are conceptually flawed or misused in practice. It is important to understand how these intellectual models are not innocent concepts, but serve as political weapons.

Varieties of Intellectual Error and Deception

Since the 1970s, a veritable menagerie of economic and quantitative tools has been introduced to the regulatory process. Most serve to delay or derail government action. This book presents a comprehensive survey of these methodologies and evaluation of their usefulness and rigor.

Chapter 1 sketches the origins of the modern environmental, workplace and consumer protection statutes of the late 1960s and 1970s, and it explains how regulated industries soon began to mobilize a series of fierce regulatory "reform" crusades. At bottom, regulated industries resented government mandates that forced them to shoulder more of the costs of their "economic externalities" — dangerous products, toxic chemicals, environmental pollution, and so on. They regarded such government "interference" with the "free market"

as economically irrational and costly, and they began to agitate for a new layer of regulatory procedures that would cripple swift and effective government action.

Cost-benefit analysis was the first of many new analytic tools introduced to make economic criteria the trump card in the regulatory process. Its embrace by regulators, and especially by OMB, represented a fundamental reorientation of the purpose of regulation. A system meant to address public health risks, environmental threats, and moral inequities was reconceptualized as an economic enterprise that was presumptively harmful to the economy. Instead of sanctioning rapid action to prevent human harm, new procedural barriers were erected to make regulation meet near-impossible standards of quantitative analysis.

A companion project of intellectual revisionism — insisting upon "sound science" in the face of regulatory uncertainty — is chronicled in Chapter 2. The goal of "sound science" seems unassailable. Who could object to it? A closer look shows that its proponents in the business community are frequently disingenuous; they have little interest in scientific rigor and complexity, but a great deal of interest in antiregulatory outcomes. How else to explain companies who zealously resist providing health and cost data to regulators while complaining that regulatory decisions are not based on rigorous and complete data? To these regulated industries, sound science really means "our science."

The first problem with "sound science" is the unstated assumption that regulatory agencies are not already conducting rigorous research and analysis. In fact, government agencies generally sponsor and solicit some of the best scientific research available. Leaving aside the question of agency performance, the "sound science" crusade assumes that science can determine what levels of protection are "safe." This is simply not true. Scientific knowledge about certain risks — say, the etiology of cancer — is often quite rudimentary and speculative. Furthermore, it is often impossible to amass enough reliable scientific data to make conclusive judgments. Uncertainty is an inescapable part of regulatory policymaking. More fundamentally, science is theoretically unequipped to answer questions of a moral and social nature, such as: "How safe do we want our society to be?" or "Which segments of our citizenry shall be protected from man-made harms?"

The Quantification Quagmire

The intellectual deceptions of sophisticated saboteurs begin with the uncritical quantification of all costs and benefits, however intangible or elusive. This process is examined in Chapter 3. To perform a cost-benefit analysis — or any other economic analyses — a regulator is required to express all prospective costs and benefits in numbers or dollar terms. By so doing, a rigorous balancing of costs and benefits can be made and sound regulatory choices adopted. That, at least, is the theory.

It sounds simple. But embedded in any quantification and monetization technique — especially as applied to intangibles like the number of cancers caused by exposure to toxic chemicals, the value of a person's life or the value of a species' survival — are profound uncertainties and value judgments. The process of translating moral, social, or ecological values into dollar sums does not mean that value judgments disappear; it simply means that they are misrepresented by numbers and go unacknowledged and undiscussed.

This is precisely the point, say critics. Since the methodologies for cost-benefit analysis (and other models) are highly technical, flexible, and inscrutable, it becomes easy to construct a model that can justify virtually anything. The political or social value judgments that are used in the calculations disappear from view.

EPA, in 2003, estimated that the life of a person over 70 is worth \$2.3 million while a younger person's life was worth \$3.7 million. The math for these calculations, based on the earning power and expected longevity of Americans, may be impeccable. But why make such differential estimates of the value of a person's life in the first place? Environmentalists argued that the resulting numbers were being used to justify not issuing stronger clean air regulations. After all, the "benefits" of preventing premature death, at \$2.3 million per life, simply were not "worth it" when compared to the higher costs that more stringent clean air regulation would impose on industry. The Clinton Administration had once calculated the monetary benefits of the proposed CAA at \$77 billion; now, through mathematical legerdemain, the Bush Administration was estimating that the same benefits amounted to a mere \$8 billion.[37] Such is the false certitude of "hard numbers."

Once the principle of quantification is accepted, however, the door opens wide to all sorts of mathematical mischief and analytic tricks. The point of these games is to use numbers to convey a false sense of accuracy, which in turn helps paper over enormous uncertainties and justify regulatory inaction.

Chapter 4 examines how this scenario plays out with two widely used methodologies — comparative risk assessment and cost-effectiveness analysis — both of which rely upon "hard numbers" to set regulatory priorities. The rationale for these methodologies is to help regulatory agencies use their limited resources in more efficient, effective ways. In theory, this goal — like "sound science" — seems unassailable.

But how are the calculations actually carried out? And do they take account of the proper factors in assessing risk? In practice, comparative risk assessment and cost-effectiveness analysis stack so many assumptions and rickety data sets on top of each other, like some towering house of cards, that the end results are more useful for ideological purposes than for informed decisionmaking. Fixated on distilling complexity down to numbers, risk comparisons assume that reliable scientific knowledge can be obtained and quantified. Conscientious scientists, by contrast, often prefer to make only provisional guesses hedged with qualifications. Should the carcinogenic risks of a chemical be judged by the appearance of tumors in test animals, alterations in cells, or detectible effects on genetic material? The ultimate risk calculations — and regulatory decisions — often pivot upon such highly debatable judgments.

As Chapter 4 explains, risk assessments not only debase the scientific complexities, they do not even purport to represent inequities that one set of people might suffer (poor people living near toxic waste dumps) at the hands of another party (a chemical company). Risk assessment metrics simply do not recognize social injustices. Nor is the intensity of risk adequately represented. By aggregating the risks facing different populations, for example, risk assessments may declare the risks to two populations identical — even though one risk (a toxic waste site) may devastate entire families and neighborhoods while the "identical" other risk (tainted water used by an entire region) is dispersed among millions of people.

Cost-effectiveness analysis makes analogous slights-of-hand. It attempts to put diverse sorts of risks into a single statistical table so that regulatory agencies can set priorities in more a cost-effective way. If Regulation A is estimated to save one life for \$5 million, for example, while Regulation B is estimated to save one life for \$1 million, Regulation B is obviously a "better buy" for the agency to focus on. But such "efficiency" calculations falsely assume that if an agency forgoes the "expensive" regulation, the "cheaper" regulation will necessarily be adopted.

The calculation also has the convenient effect of exonerating parties responsible for harming people and the environment. Should a corporation responsible for a nasty hazard be allowed to avoid correcting it, and profit from so doing, simply because there is another hazard out in the world that is theoretically cheaper to ameliorate? This sort of gross injustice is inevitable when economic efficiency becomes the test for whether or not to regulate.

The Eclipse of Moral Judgments by Economics

The proliferation of economic models that enshrine efficiency as the touchstone for action corrupts the very purpose of health, safety, and environmental regulation. The sophisticated saboteurs have not only insisted that federal regulatory agencies set their priorities by applying economic efficiency criteria (using comparative risk assessments and cost-effectiveness studies), they want federal regulatory policy in its entirety to be constrained by efficiency standards. The idea is that regulatory policies should maximize "social welfare" — as measured economically, of course. A regulatory policy is "efficient" if those who gain from it (the "winners") could fully compensate those who lose out from it (the "losers"). The greater the differential, the greater the efficiency.

Thus, if coal miners whose lungs are damaged by coal dust say they would be willing to pay \$5 million to have regulatory health protections (their "revealed preference"), but the coal industry could gain \$10 million in profits by avoiding such requirements, our society's overall wealth would be increased by \$5 million by not adopting regulatory protections. This would be "efficient" under the "Kaldor-Hicks" test, named for the two economists who proposed it in 1939.

The morally bankrupt nature of this test becomes clear when one understands that Kaldor-Hicks efficiency doesn't require the winners to actually compensate the losers. The test purports only to measure overall gains in societal wealth, and it is not affected by the distribution of wealth. The actual value of prevention and other social equity concerns are also ignored. Hence under Kaldor-Hicks, a polluter or careless drugmaker is entitled to inflict harm on other persons so long as the costs of reducing that harm are greater than the benefits of reducing the harm. Such perversities are the height of "rationality" in the minds of many analysts and regulated industries (though it is revealing that they rarely apply the same efficiency criteria to the public policies governing street criminals or national security).

What these intellectual games reveal is a commitment to dubious economic models over the fate of actual people. In fact, the efficiency models sanction the idea of "statistical deaths," in which it becomes socially acceptable to inflict hazards on people so long as their identities

remain unknown. The awful human and ecological consequences of failing to regulate are thereby sanitized.

The misuse of economics reaches still further levels of absurdity and intellectual dishonesty when it comes to valuing the benefits of regulation. As we see in Chapter 6, once regulators decide that economic factors will govern decisionmaking, they commit themselves to a highly problematic enterprise — assigning monetary values to ecosystems, the quality of life, and people's lives and health.

Once again, the process depends upon a variety of jerry-rigged methodologies based on conjecture, malleable data, and contestable value judgments. How shall we value regional biodiversity, wilderness areas, or unique geological features? Since none of these resources are traded on markets — they generally cannot be "consumed" or replaced — there is no "natural" price for them. Undeterred, economists estimate their value based on restoration and replacement costs and "behavioral use" valuations (the implicit premium that a resource commands because people use it for, say, recreation).

One of the most contorted attempts to squeeze non-economic values into an economic straightjacket is the analytic model known as "contingent valuation." This is an attempt to assign surrogate prices to such intangibles as aesthetic and philosophical appreciation of a resource. People are asked how much the Grand Canyon is worth to them in dollar terms, for example. A related tool is the "willingness-to-pay" standard: How much is a worker willing to pay to avoid a given hazard?

The average of the answers becomes the fanciful "value" of risk avoidance. That workers are not likely to secure such payments from their employer through higher wages is irrelevant. Nor does the model consider that economically vulnerable workers are more likely to accept lower "prices" for endangering their health than affluent people with a higher sense of entitlement and ability to pay. Instead of treating all Americans by an equal standard, the willingness- to-pay standard sanctions and exploits social inequality.

The Triumph of Theory over Reality

The bogus methodologies seem to grow like kudzu. Why regulate the risks of carcinogenic chemicals, the analyst blithely muses, when it is so much cheaper to curb the more serious risks of smoking and junk foods? Of course, the analyst then shows no interest in the empirical realities; the money that a chemical company might save by avoiding regulation, for example, is not going to be spent instead on anti-smoking and nutrition education. The company will simply pocket the money, and no preventive action will occur.

This example illustrates a recurrent tactic of the sophisticated saboteur: assert theoretically plausible propositions and develop a logical chain of thought — but then avoid exploring how real life may actually defy the theoretical model. Typically, empirical data are unavailable or deficient. Or the importance of moral judgments, social policies and aesthetic concerns is grossly distorted as they are converted into economic sums. The black art of converting intangible values into monetary sums provides just the opportunity needed for the saboteurs to interject their own subjective biases, quietly and without public scrutiny. The result: "Authoritative" hard numbers.

To acknowledge this practice — to admit that "soft" values are inevitably a part of the "neutral" models that generate "hard" numbers — is to force a point that many analysts and most regulated industries prefer to avoid: whose values shall prevail? Champions of cost-benefit analysis insist that their economic modeling is entirely objective and fair-minded. They refuse to admit that economic valuation is itself a contestable tool for determining the worth of human life and many aspects of nature. This reaches surreal dimensions when economists presume to calculate the costs of global warming — and the benefits of preventing it — in monetary terms.

The mandarin presumptions of cost-benefit modeling that began with early cost-benefit analyses of dams and similar public works projects have greatly metastasized since the 1970s. As we explore in Chapter 7, federal agencies, at the insistence of regulated industries, are required to estimate the industry compliance costs for proposed standards — and the overall costs of federal regulation in general. As with cost-benefit analysis, a seemingly rational, straightforward process is riddled with questionable methodologies.

For starters, companies have strong incentives to exaggerate the expected costs of compliance. What better way to combat a proposed regulation? But the U.S. General Accounting Office (GAO) in 1996 suggested that companies literally don't know what they are talking about. The GAO found that corporate cost estimates did not accurately correlate actual compliance costs with specific regulations, for example. They also conflated normal business expenses with compliance costs, thereby failing to identify the actual incremental costs of regulatory compliance.

Corporate estimates of compliance costs are often inflated, as well, because they typically do not take into account how regulation often enhances a company's economic performance. In two excerpts in Chapter 7, economists Michael Porter and Nicholas Ashford argue that regulatory standards often stimulate new production efficiencies and superior technologies. EPA's automobile emission control standards, for example, helped prod the development of cleaner, more fuel-efficient engines, which proved to be an enormous competitive boon. The phase-out of chlorofluorocarbons, which erode the earth's ozone layer, helped prod chemical companies to pioneer new markets for benign substitutes.

If regulatory decisionmaking based upon flawed estimates of costs and benefits represents the victory of the sophisticated saboteurs, as Chapters 1-7 document, what then are the alternatives? Fortunately, there are a number of approaches that would improve health, safety, and environmental regulation that do not suffer from the defects of narrow cost-benefit-based regulatory decisionmaking. Refusing to assume that the only legitimate role for government is to fix broken markets, many progressive observers of the current regulatory gridlock are identifying and rediscovering alternative decisionmaking frameworks.

The "precautionary approach" to regulation begins with the assumption that "it is better to be safe than sorry," gives credence to reasonable "worst-case" analyses, and adopts a preference for protection in evaluating regulatory alternatives. Many pragmatic observers urge regulators to focus on the source of risk-producing activities and demand that those responsible for those sources do the "best that they can" to protect potential victims. The focus is on identifying and installing pollution reduction and safety-enhancing technologies,

rather than on divining just the right level of protection. Although neither of these approaches may be the most "economically efficient" route to protection, it has a much better chance of reducing risks in the real world than burdensome and time-consuming quantitative risk assessments and cost-benefit analyses. Indeed, sometimes the most effective (and, ironically, even the most efficient) way to get from a risky situation to a much safer one is by completely banning risk-producing activities or other "radical technology-forcing" techniques.

For those decisionmakers who want to examine as many aspects of a problem and its potential solutions as possible, "multiple alternative-multiple attribute" analysis is a far preferable alternative to reductionist cost-benefit analysis. Less quantitative approaches, like "open-ended balancing," also provide pragmatic vehicles for examining the pros and cons of alternative regulatory interventions without descending into the quagmire of quantitative cost-benefit analysis.

Concerns for fairness, a concept that is wholly foreign to cost-benefit analysis, motivate many observers to insist that regulatory decisionmakers devote more attention to the distributional impacts of their choices and provide greater protections for otherwise unempowered workers and poor and minority communities.

Similar fairness concerns suggest caution in devolving regulatory decisionmaking authority from the federal government to states and local entities. Although many states and local governments are well-placed to understand and do something about health and environmental risks, their citizens can become victims of a pernicious "race-to-the-bottom" as local economic interests threaten to re-locate if state and local governments are insistent on providing regulatory protections. The solution is a process of "differential oversight" under which states that consistently provide a threshold level of protection are given greater flexibility to administer federal programs.

In addition to its inherent fairness, proponents of the "polluter-pays" principle stress that making employers "internalize" the costs that their activities impose on their workers, their neighbors, and the environment provides a constant incentive to come up with more efficient and more effective ways to ameliorate health and environmental harms.

Finally, many modern cutting-edge scholars are reminding us of the ancient wisdom that we did not inherit the earth from our fathers; we are borrowing it from our children. We do not have an inexhaustible supply of resources available to use as we please; we are the stewards of a very large spaceship that must be maintained for future generations. A new form of economic analysis, called "ecological economics" is rapidly becoming available to guide decisionmakers. This new kind of analysis begins with a firm realization of the reality of resource limits and attempts to inculcate an understanding of the meaning "too much" in today's consumers. This greater regard for the future, for example, would justify applying a negative discount rate to the benefits of regulations that recognizes the enhanced value of today's regulations to tomorrow's citizens.

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The noble mission of health, safety, and environmental regulation has been under siege for many years. It is no secret that the process is far from perfect.

Nothing is ever tidy for an enterprise at the cusp of scientific knowledge, the epicenter of political controversy and the frontier of evolving social norms. Yet regulation remains our best vehicle for protecting Americans' freedom from harm. No other venue exists for the open consideration of scientific knowledge and the forging of social consensus for preventing hazards in legally enforceable ways.

While critics of regulation who legitimately seek to improve government regulation often raise valid points about the deficiencies of the regulatory process, the practitioners of sophisticated sabotage are pursuing another agenda altogether.

They have little interest in improving regulation; they seek to paralyze it. Their analytic models do not attempt to make regulatory decisions more informed and intelligent; they seek to exploit the uncertainties that will always exist in order to force interminable analysis and secure indefinite delay. Theirs is a singularly callous spirit of inquiry. It is seen in a relentless, narrow focus on economic costs and efficiencies; a lack of interest in moral responsibility and social inequity; and a zeal for airtight theories and logical reasoning but indifference toward aching human tragedy.

The only way to recover the animating spirit of regulation — the imperative to prevent harm, save the environment and restrain those responsible for inflicting damage — is to debunk the cynical intellectual games that regulated industries play. A cocoon of abstract discourse has grown up around so many regulatory issues that one can easily forget that "statistical deaths" happen to real people.

We must begin to challenge the pernicious analytic models and economic theories that are choking responsible regulation, and begin to invent new ways to appreciate the actual value of regulation. Sophisticated sabotage must give way to a fresh vocabulary that recognizes the humanistic, qualitative purposes of regulation. Any new analytic models or terms of art are likely to be challenged (as regulation already is), but a new discourse of this sort would have the virtue of being empirical, attentive to Americans' moral and social values, and mindful of actual scientific complexities. That can only be an improvement over the deceitful tyranny of shiny numbers that has paralyzed regulation for too long.

Introduction Endnotes

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