

Book Reviews

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Editor

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Katherine Kaufer Christoffel

Private Guns, Public Health, by David Hemenway, Ann Arbor, MI: University of Michigan Press, 2004, 344 pp., \$27.95 cloth.

“The public health approach is ideally suited to deal with our gun problem. Public health emphasizes prevention rather than fault-finding, blame, or revenge. It uses science rather than belief as its basis and relies on accurate data collection and scientific analysis. It promotes a wide variety of interventions—environmental as well as individual—and integrates the activities of a wide variety of disciplines and institutions. Most important, public health brings a pragmatic attitude to problems—finding innovative solutions” (p. 25)

Based on that laudable view, David Hemenway wrote *Private Guns, Public Health* to provide an authoritative overview of public health thinking about gun injuries and deaths in the United States. The perspectives and data summarized were developed over several 20th-century decades, and refined over the last 15 years, that is, in the wake of the tsunami of urban youth gun homicides in the late 1980s and early 1990s. The material is well-known to those who were involved in gun injury prevention research and advocacy during this time. It is not as well-known to the general public, policymakers, or young public health professionals. This book is an excellent summary for all of us and a good introduction to the field for newcomers. It will be a superb textbook for courses on violence as a public health problem and resource for legislative aides and others working toward better policy approaches to the ongoing toll of over 25,000 deaths—and many more nonfatal injuries—per year.

The book is organized in ten chapters: Guns and American Society; The Public Health Approach; Gun-Related Injury and Death; Self-Defense Use of Guns; Location (home, school, public); Demography (children, youth, women, African-Americans); Supply, Policy Background (2nd Amendments, public opinion, evaluating regulation); Policy Lessons (rebutting the NRA, Lott and Kleck; analogies to tobacco and alcohol; international aspects); and Policy Actions. The chapters cover overlapping topics, and

some material is presented multiple times. Thus, this book is not designed to be read cover to cover, but rather to be tapped to answer specific questions. Each chapter ends with a summary; together, these provide a clear executive summary of the book.

The chapters are extensively (though not exhaustively) referenced, and the resulting bibliography is included. (It is heavy on work by Hemenway and his close colleagues, which is only fair.) A lengthy and useful appendix describes methods and related issues—for example, case-control and ecological studies, time series analysis, controlling for urbanization, reverse causation, oft-debated research on gun-carrying—which will be particularly useful to academics and students. Some methods discussions remain in the chapters, and the reader wishes that it had all been moved to this separate, excellent technical appendix.

That is because Hemenway's writing is clearest and most compelling when he is using available information to tell a story. Among many memorable ones are the history of the development of motor vehicle regulation to promote safety (pp. 12–17), what is known about the frequency of self-defense gun use (pp. 69–74), how manufacturers can help reduce gun injury (pp. 134–140), the history of the enactment and interpretation over the years of the 2nd Amendment to the U.S. Constitution (pp. 152–161), and the history of tobacco and alcohol regulation (pp. 188–196). The text also benefits from the judicious inclusion of anecdotes, many taken from surveys. They are presented as anecdotes should be, that is, to illustrate a data-based point. For example, the following illustrates “unprovoked brandishing,” an under-counted use of guns:

A woman in her thirties was walking with a female friend when a “guy across the street yelled something. My friend yelled back and he crossed the street and pulled out a gun from the front of his pants. He asked if she had said something. She said ‘no’ and we left.” (p. 57)

Key points from the book belong in the knowledge base of everyone in public health, injury prevention, and public policy.

- The U.S. has more lethal crime than its sister developed countries, but not more crime that is non-lethal. The difference has to do with the use of guns, mainly handguns.
- The majority of gun deaths in the U.S. are due to suicide.
- Research consistently shows that reduced access to guns—especially handguns—reduces gun death and injury (regardless of manner of death).
- Public health has a lot to add to society's approaches to fight gun deaths and injuries. This includes approaching the problem as one that concerns consumer product safety.
- Public health encourages multi-disciplinary approaches, based on good data and past injury-prevention experience and resulting awareness of the need to adapt to changing conditions.
- Specific, sensible policy options are available, including: creation of a federal “agency that has the power to regulate firearms as a consumer product (and so to create performance standards, ban and recall overly hazardous products); licensing of gun-owners and registration of handguns, as is common in other high-income countries; a national one-gun-a-month law; requiring all gun transfers to go through licensed dealers (with background checks); and tighter oversight of licensed dealers” (pp. 225–226).
- The health sector has an important role to play in data collection, individual and public education, and injury prevention advocacy.

Of course, in addition to its many and substantial strengths, the book has some limitations. Among these are some that are organizational. The book's intended audience is not clear: it seems to be "everyone and, especially, policymakers," which proves too vague for a consistent narrative voice and scientific level of discourse. The book seems to be addressing specific questions, but these are not always stated explicitly; when they are (as in the chapter on self-defense use of guns), this is helpful. Repetitions can be reduced (perhaps by creating an appendix that summarizes key studies). The epidemiology sections can become clearer with the addition of more figures and a reduction in technical talk.

Policy recommendations are scattered through the chapters, and would be clearer if gathered in a section in each chapter. Though Hemenway introduces Haddon's work in his introductory discussion of public health approaches to injury prevention, he does not tie the policy recommendations that appear throughout the book to that framework.

Some other limitations of this book are more substantive. Hemenway recounts the stories of early adopters of gun injury prevention approaches, for example, interdiction in Boston, policy and counseling recommendations by the American Academy of Pediatrics, data gathering at the University of Wisconsin. A broader discussion of means to disseminate these innovations would be instructive.

Though this is a book on public health, its focus is on policies and actions based outside the health sector. This is in part because clinical prevention counseling has not been well-studied; the political reasons behind that deserve more discussion. So does the role of organized medicine—and its HELP Network (www.helpnetwork.org)—in promoting health analysis of gun deaths and injuries. The focus away from the health sector means that disabilities are not discussed as fully as they might be. In this time when annual U.S. gun deaths have fallen to a new too-high level of stability, the population of gun-disabled continues to grow. Public health professionals and policymakers need information to help them turn more effort toward the prevention and management of these disabilities. Related to this, the financial health costs of gun violence receive only passing mention.

Hemenway lucidly explains how "safer guns" is an approach that builds on successes in motor vehicle injury prevention, and properly advocates a variety of measures to interrupt illicit trafficking. Yet he also points to policies that reduce gun access as ones that likely account for lower gun death rates in other nations. Thus "fewer guns" would also seem to need attention. (This is particularly true as the development of "safer guns" has faced real feasibility obstacles, so these are not yet an operational option.) Hemenway does not carefully pursue "fewer guns." He correctly states: "The public health approach is not about banning guns" (p. 225). But at times he seems to mean that public health cannot include banning handguns, which is not correct. Dangerous items of low utility *are* sometimes banned (for example, lawn darts) and specific types of guns *are* banned in the U.S. (for example, fully automatic weapons). We can only benefit from increased discussion of the pros and cons of bans on other specific types of weapons, including some or all handguns. No one is arguing to ban all guns in the U.S., a straw man that needs to be exposed as such. One need not demonize discussion of a handgun ban—or any potential policy option—while advocating other specific policies.

Some important topics are also touched on but not addressed in depth. These include gun injuries affecting Latinos, the importance of culture and norms in gun injury occurrence and prevention, and the challenges of the most complex questions in gun injury epidemiology and policy analysis (for example, why gun deaths

and injuries fell in the 1990s, and why the gun lobby is powerful when its policies are not supported by the majority of Americans).

These limitations only mean is that this book cannot stand alone as *the* source on public health approaches to gun injury prevention. One book can rarely serve such a function. Despite its limitations, this unique book is a wonderful addition to the literature, which should be on the shelf of everyone who undertakes gun injury prevention in the U.S. and internationally.

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Steven Kelman

Politics, Policy and Organizations: Frontiers in the Scientific Study of Bureaucracy, by George A. Krause and Kenneth J. Meier, Eds., Ann Arbor, MI: University of Michigan Press, 2003, 352 pp., \$24.95 paperback.

This is a collection of papers by political scientists, many of them younger ones, studying public organizations (referred to in the papers as “bureaucracies”) and public officials (whom the papers call “bureaucrats”). One of the co-editors, Kenneth J. Meier, is among the few academics with visibility in both political science and public management, and many papers in this volume were originally presented at a special workshop on “the scientific study of bureaucracy” conducted at the 1999 Public Management Research Conference, a recurring event begun in the early 1990s by public administration and public management scholars.

In their conclusion to this collection, Meier and Krause bravely state that “[b]ureaucracy is a growth area in political science,” adding that during “the last two decades, 110 articles with bureaucracy as a central feature have been published in the four leading general political science journals.” In fact, however, virtually the entire contemporary political science literature on government organizations deals with one and only one issue—ways that elected officials (mostly Congress) control the behavior of government organizations, whether through “hard-wiring” their structures or through efficient methods of oversight—even though they lack the time or expertise directly to intervene in agency activities very much.

The delegation problem this literature treats is important. It is also an obvious one for political scientists, since it involves politics. Nonetheless, the laser-beam focus of political scientists studying organizations on this one question has been unfortunate. First, the way the political science literature generally approaches this question is normatively impoverished, assuming simplistically that “democracy” requires that political “principals” control bureaucratic “agents” and subsuming government organization autonomy under the rubric “shirking,” the allegedly neutral word used in principal-agent theory. Second, the literature is empirically suspect in its strong conclusions about congressional success in achieving control over the direction of these organizations. The area got set on a bad path with the renowned but deeply flawed Weingast and Moran study of the Federal Trade Commission (1983). (The study reached the conclusion that Federal Trade Commission policies became more conservative in response to political changes in Congress just at a time when anybody who knows anything about what the organization was actually doing knew its policies had in fact veered sharply leftwards. The authors’ conclusion was based on a decline in the number of cases the agency filed against firms, but in fact the Commission’s new approach involved initiating general rule-

making activities instead of filing individual cases.) Third, although the delegation question is one among many interesting ones involving the behavior and performance of government organizations, it is at the end only one among many interesting ones, hardly worthy of the unique focus it has received.

In fact, despite the optimistic suggestion that the study of government organizations is a “growth” area in political science, the traditional concern within political science with the performance and operation of government organizations has essentially disappeared over the last 20 years. With the exception of Gary Miller’s magnificent *Managerial Dilemmas* (1992), no political scientist in recent memory has produced important work on this topic that would continue a tradition going back to Max Weber and Luther Gulick, through Herbert Kaufman, and on to James Q. Wilson.

Meanwhile, in a sort of intellectual parallel universe, during the same period where political science was moving away from any interest in the behavior and performance of government organizations, public management began to appear as a topic of study in public policy schools. Many of the pioneers of public management were trained as political scientists—one thinks of Eugene Bardach, Michael Barzelay, Don Kettl, and Paul Light. But, as they became part of a new public management community, their links to political science and, indeed, to academic social science in general, faded.

This separation between public management and political science was both for good and bad. On the positive side, the new field of public management engaged in a serious discussion of normative issues surrounding the power of non-elected public managers in a democratic society. Public management scholars were quicker than political scientists, who were further away from the realities of government management, to notice the growing importance of new forms of governance through various sorts of partnership or contractual relationships. And, above all, public management retained a central focus on making prescriptions intended to improve organizational performance that political science and, by and large, the social sciences in general, had abandoned.

But the separation between public management and political science was bad as well. Intellectually, public management developed into a swamp of “not invented here” attitudes, adrift from social science scholarship that could have enriched understanding of the topics people in the field were studying. Methodologically, the quality of much empirical public management research was far below accepted standards of social science. Insights and broad conclusions based on tenuous evidentiary reeds became public management’s accepted modes of operation. (I include some of my own work in this criticism.) As the ability to generate progress through good empirical work declined, intellectual progress in the field slowed to a snail’s pace.

The authors of the papers in *Politics, Policy and Organizations* are trying to get the twain of political science and public management to meet. Their venture is a partial success—at least a decent first step. The best papers in this volume combine solid social science methodology with substantively interesting results that do not merely reproduce the political science obsession with the delegation problem. Michael Licari finds that the mere presence of anti-indoor smoking laws has a negative effect on smoking, even if the laws are unaccompanied by enforcement activities. Daniel Carpenter presents an interesting theoretical model of regulatory agency delay in making decisions involving potentially hazardous products. The David Spence and Kevin Smith papers, on arguments for why voters might choose to delegate power to non-elected agency officials and on the impact of school privatization on the content of education, are also interesting, though less methodologically sophisticated.

The collection has three weaknesses. First, some of the papers deploy complex methodological strategies in support of relatively straightforward or unsurprising conclusions. More important, too few of the papers expand outward from the political science home base of the delegation question. Indeed, in their conclusion, Krause and Meier almost seem to accept this as the central question involving government organizations with which political scientists should be concerned, asking only that political scientists not see agencies as passive receptacles for the activities of elected officials but that they themselves become active participants in the process by which the groundrules for their activities are established. Third (and relatedly), the papers generally make little movement in the direction of the most positive feature of public management research, namely, the concern for improved public-sector performance and the interest in developing prescriptions that could improve performance. The meeting of the twain—the use of social science rigor on behalf of developing prescriptions for improved public performance—still awaits us.

Finally, I wish briefly to return to a parenthetical in the first paragraph of this review. One thing public management scholars can teach political scientists is to avoid denigration in the name of science. Political scientists may believe the words “bureaucracy” and “bureaucrat” are neutral scholarly phrases, and perhaps they were when Max Weber used them, but in contemporary language, they are words of opprobrium. By using them, political scientists are in reality aligning themselves with those who don’t like government. Just as bad, by using phrases that participants in the system they study do not use about themselves, they psychologically distance and alienate themselves from those they study, not a good stance from which to think about prescription for improving things. There are perfectly neutral phrases around for the same concepts—“government organization” and “public official” or “civil servant”—that also have the virtue of being the phrases those inside the system themselves use. Political scientists, particularly those beginning a needed dialogue with the public management community, need to watch their language.

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REFERENCES

- Miller, G. J. (1992). *Managerial dilemmas: The political economy of hierarchy*. New York: Cambridge University Press.
- Weingast, B. R., & Moran, M. J. (1983). Bureaucratic discretion or Congressional control? Regulatory policymaking by the federal trade commission. *Journal of Political Economy*, 91, 756–800.

Theodore R. Sizer

Ms. Moffett's First Year: Becoming a Teacher in America, by Amy Goodnough, New York: Public Affairs, 2004, 258 pp., \$25.00 hardcover.

The Trouble with Ed Schools, by David F. Labaree, New Haven, CT: Yale University Press, 2004, 256 pp., \$35.00 hardcover.

These two recently published books about schooling and education first struck me as an odd couple to review for *JPAM*.

One—*Ms. Moffett's First Year*—is a warm account by Abby Goodnough, a *New York Times* reporter, about a woman, Donna Moffett, who left a secure position as a secretary in a law firm to jump, with almost no preparation, into teaching at a large New York City elementary school.

The other—David F. Labaree's *The Trouble With Ed Schools*—is, by contrast, a cool scholarly analysis of the history, functioning, and purpose of schools of education within large universities. Labaree is a historian and sociologist with long experience both as a scholar and as a faculty member in education first at Michigan State University and now at Stanford. The book is tightly argued, a pedagogical physician's analysis of an ailing patient.

First Year is a story book, and the reader gets to meet the swarm of first graders assigned to Donna Moffett's classroom at PS 92 in Flatbush, Brooklyn, and, in time, some of their parents and a small procession of colleagues and superiors supporting and supervising her work. Goodnough's telling reminds one of Bel Kaufman's hilarious *Up the Down Staircase* (1965) and especially of Samuel G. Freedman's *Small Victories: The Real World of a Teacher, Her Students, and Their High School* (1990), a year Freedman, again a *Times* reporter, spent chronicling the work of a remarkable teacher at New York City's Seward Park High School. Freedman's and Goodnough's books are testaments to the resilience, stubborn good humor, and moral commitment of strong people working with children, and to the often mindless, even cruel functioning of the institution and the bureaucracy within which they do this noble work. Goodnough's account is at once poignant, funny, distressing, and revealing.

That said, a reader wonders: Is total devotion by an adult individual to a large group of needy students with almost no sustained support or constructive collegiality provided for her or him unavoidable? It certainly is familiar; and Goodnough reports the low "holding power" of young faculty in schools such as PS 92. Might her school have distributed its human resources in a way that provided Donna and her colleagues a better chance of succeeding, of feeling less overwhelmed, of feeling ready to return there? Does one have to be a saint or a masochist to stay a long professional course with children? Ms. Moffett's example is a shining one, but behind it lurk deep systemic concerns.

Labaree's book also deserves careful reading and, given the complexity of his arguments, rereading. His is not a condemnation of those who labor in schools of education as much as an analysis of what they do and why they do it, this explained largely in terms of the history of what started as "normal schools" and now take a variety of forms, including graduate schools of education for research and advanced training. Labaree looks carefully at the "market" that ed schools serve and the effect of the character of this market on the status of their faculty and students. He writes of the "stigmatized populations"—women, children, and teachers—that inhabit most public schools and the colleges and universities that prepare them and the costs that those unworthy, unnecessary stigmata have on policy and practice.

The title of his final chapter is telling: "The Trouble with Ed Schools: Little Harm, Little Help." Public education is an immense and complex enterprise but one over which its school-level practitioners have very little control and which is chronically underfinanced. As he says, ed schools "are easy to blame," but the reasons for their weaknesses lie far more outside their current sphere of work than within it. He summarizes: "The good news about ed schools is that they are not powerful enough to do much harm to American education, despite all the heinous crimes that are often attributed to them. But the bad news is that they

are not powerful enough to do much good for a system of schooling that could really use their help” (p. 194).

The most refreshing quality of Labaree’s book is the cool distance from which he views schools of education. There is none of the passionate turmoil and self-righteousness that many contemporary critics exhibit. The most useful part of his study is the pondering of the history and the social and political dynamics that affect our culture’s largest public profession, thereby suggesting the need for deeper thinking about learning in a democracy and better settings for that learning to take root. What the reader does not discover from Labaree, however, is what this analysis might mean for reform.

All that said about both books, they have much in common and deserve a combined look. They tell, albeit in different ways, important, serious, interconnected stories.

Inevitably, one ponders where these stories might lead. In no part of *Ms. Moffett’s First Year*, for example, was there described or implied any person’s challenge to the very notion of “first grade,” this familiar common weekday gathering of varied children merely on the basis of their ages with a program largely led by a single teacher working in almost total isolation. No serious challenge is heard about the role (if not to the quality) of her “supervisors,” people who “came into” the classroom to help, critique, or direct Donna Moffett. All this was assumed as fixed, in the present and the past.

Donna was all too aware of the chaos in many of her children’s families, but there was precious little that she or any other adult who appears in the book could do about it. For Donna and her peers, school is what school was: The routines and expected parochialism of her classroom will not surprise any reader.

There is much that can be done for Donna Moffett, but such would require fundamental rethinking about what in fact it means to grow up—especially to grow up poor—in the wealthiest and, thanks to the modern media, most profoundly interconnected national community and what it might take to give those children the big boost that they deserve. Leaving all as is, recruiting little-prepared, decent idealists to the teaching corps and piling high-stakes testing on top of them and their little charges in mis-designed schools is, as we can see in Goodnough’s book, neither sensible reform nor sensitive human practice.

It is here that the ed schools, and the universities of which they are a part, clearly have a responsibility and, if Labaree’s argument is accepted, have equally clearly failed to grasp it. If Ms. Moffett needs intellectually powerful and politically influential friends—people who are more than mentors, more than merely old dogs teaching new dogs old tricks (even in the best and most imaginative sense)—the ed schools (or a moral equivalent of ed schools) must provide them. The silence of today’s mandarins of professional education on the need for fundamental, even wrenching reform is embarrassing; that such “silence” is never identified in Labaree’s book is itself revealing.

These two books—not at all an odd couple, it appears after all—implicitly make that case. Only time will tell if the academy and the school authorities determine to address it with the imagination, courage, and resources that it dearly deserves.

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Jonathan B. Wiener

Catastrophe: Risk and Response, by Richard A. Posner, New York: Oxford University Press, 2004, 322 pp., \$28 hardcover.

Collapse: How Societies Choose to Fail or Succeed, by Jared Diamond, New York: Viking, 2005, 575 pp., \$29.95 hardcover.

One might think that we live in the safest epoch in human history: Life expectancies are the longest they have ever been, childhood diseases are in decline, nutrition is improving, the Cold War is over, and even the eradication of poverty is within sight. But in spite of these successes—or perhaps because of them—our worries now turn to other threats.

Every culture has a mythology of the end of the world, usually triggered by some extrinsic force. But serious thinking people are supposed to dismiss such prophecies. The bearded man on the corner holding up the sign announcing “The End is Near” is a cartoon icon of lunacy.

Now in meticulously researched and yet highly accessible books, Richard Posner and Jared Diamond, two very serious thinkers, are warning that we should worry a good deal more about catastrophe and collapse triggered by human choices. Posner is a judge on the U.S. Court of Appeals for the Seventh Circuit, a law professor at the University of Chicago, and perhaps the most prolific legal scholar in history. He is also one of the founders of the law-and-economics movement, which has often cautioned against government regulation to solve problems that markets could handle on their own. Diamond is an eminent biologist at UCLA, whose last book, *Guns, Germs and Steel*, won the Pulitzer Prize.

This pairing is reminiscent of earlier combinations of biologists and economists who, writing independently, proved influential in the theory of environmental protection in the 1960s: Rachel Carson (whose *Silent Spring* warned of toxic contamination) and Ronald Coase (whose “The Problem of Social Cost” showed how externalities are the product of transaction costs and how transferable entitlements could solve such inefficiencies); and Garrett Hardin (whose “The Tragedy of the Commons” called for restrictions on depletion of shared resources) and Mancur Olson (whose *The Logic of Collective Action* showed why cooperation to protect shared interests is so difficult).

Diamond’s concern in *Collapse* is similar to Hardin’s: the depletion of valuable resources, such as forests, because of the lack of institutional constraints on resource use. Hardin warned that individual rationality could lead to mutual ruin. Diamond amplifies that theme with detailed case studies of Easter Island, the Anasazi, the Mayans, the Viking settlements, and other societies in which resource depletion apparently destroyed the economic and political system. He identifies five key factors—environmental damage, climate change, increasingly hostile neighbors, decreasingly friendly trade partners, and failure to respond to environmental problems—of which he argues the last is most pivotal (while he recognizes that it does not explain every societal failure—he notes the Soviet Union as a counterexample). In the final chapter, Diamond enumerates 12 problems of resource depletion, pollution, and population growth facing modern societies. These problems are gradual and cumulative: extended overuse eventually triggers decline or even a crash. The question is why institutions do not respond earlier to head off this crisis, which Diamond attempts to diagnose in Chapter 14. He laments that societies often forget past shortages or overlook gradual trends, and overconsume water,

forests, and energy as if good times will last. Like Hardin and Olson, he worries that individually rational behavior will thwart collective action.

But as Douglass North, Elinor Ostrom, Harold Demsetz, Gary Libecap, Robert Ellickson, Carol Rose, and others have shown, in many cases these dire results do not occur, because institutions do develop to manage and prevent overuse. Diamond, too, recognizes some success stories; yet his selective sample of cases of collapse, rather than a diverse array of both failures and successes, prevents him from testing which variables influence the outcomes. Via signals of scarcity (such as rising prices), reciprocity, monitoring, and sanctions, markets and societies can successfully rein in overuse. The limits-to-growth alarmists of the 1970s overstated fears of “overshoot and collapse” because they neglected the roles of price signals, market responses, and institutional change. Even in large societies lacking close-knit reciprocity, and even in cases of externalities not reflected in market prices, collective action to protect the national or global environment can succeed, as in the Clean Air Act and the Montreal Protocol to phase out CFCs (despite Mancur Olson’s prediction that collective goods will go unprovided, thus implying that either his theory is wrong or that these ostensibly public-interest policies are actually cases of special-interest rent-seeking). The tragedy of the commons is mainly a serious threat where markets and institutions fail to respond to signals of scarcity with incentives that redirect behavior appropriately. Resources priced in markets, or governed by effective democratic institutions with secure tenure, externality taxes, or tradeable quotas, are better shielded from depletion than are resources not priced in markets, such as clean air or biodiversity, or governed by myopic, unresponsive or corrupt institutions, such as many forests and fisheries.

Whereas Diamond addresses the classic “tragedy of the commons” through historical field studies, Posner’s focus is on scientific forecasts of what one could call the “tragedy of the *uncommons*.” *Catastrophe* treats the extreme: events with very low or unknown probabilities and very high impacts. Indeed, Posner says he is only speaking of true catastrophes that would threaten all human survival, or all life on Earth; even pandemics killing 20–40 million people (like the 1918 influenza) do not count for him as true catastrophes. In a long Chapter 1, he assesses a wide variety of potential catastrophic risks, including particular attention to four: a large asteroid collision causing a mass extinction event; abrupt climate change leading to a hothouse or snowball planet (as contrasted to gradual global warming, to which humans and even ecosystems could adapt); an accident in a high-energy particle accelerator that produces a “strangelet” cluster of quarks that convert the Earth to a small lump; and a bioterrorism attack using a newly engineered pathogen against which there is no defense. These catastrophic risks are particularly problematic because they may exhibit no signal of gradually worsening scarcity; there is only a sudden, rare, annihilating event, with little or no chance to respond. And although some of these events, such as past asteroid collisions and climate shifts, can be observed in retrospect to gather empirical evidence of their incidence, causes, and remedies, that is not possible for others, such as the strangelet problem. Moreover, Posner argues at length in Chapter 2 that we are psychologically and politically disinclined to give serious attention to low-probability catastrophic risks. (Diamond even assumes an asteroid collision is “beyond our control,” confirming Posner’s concern.)

Posner uses benefit-cost analysis (BCA) to argue in favor of significant protective actions to prevent these risks. This may not be persuasive to those who reject BCA altogether, at least when it relies on quantification and monetization of all consequences. Nor will all of Posner’s calculations please economists who favor and con-

duct BCA: many of his estimates are crude stabs at very elusive numbers. Posner himself calls his estimate of the benefits of particle accelerator experiments a “wild guess,” and he does not offer a quantified value for the losses due to abrupt climate change (because he says he cannot assign a probability). In Chapter 3, he offers a number for the value of a statistical life lost to a very low-likelihood catastrophe—\$50,000 per life—that is far lower than the \$7 million figure used by the U.S. government to assess health regulations. (Diamond uses BCA with a value of \$5 million per life to argue that air pollution control is justified.) Posner bases the \$50,000 figure not on a global average value (which might be around \$1.5 million), but on the premise that people would pay almost nothing to avoid very unlikely events. Yet Posner recognizes that economic theory does not support the lower figure (because the value of a statistical life barely changes as the probability of its loss declines from small to smaller), and that public disregard of unlikely risks may be erroneous. Still, Posner “supposes” just \$50,000 per life saved in order to show that his argument in favor of precautions is robust even at such a low value. Hence he finds that the loss due to the extinction of all human beings (he assumes 6 billion alive today, plus, arbitrarily, another 6 billion of future generations) would be only \$600 trillion. He notes that this figure is a minimum estimate, and that it would rise significantly with a higher value per life or a larger number of future descendants. (At \$7 million per life, just the 6 billion alive today would be worth \$42 quadrillion.) These figures also neglect the special difference in kind (not just multiplicative degree) of losing the existence and option values of *all* of humanity, or *all* of life on Earth. As Michael Toman has remarked about efforts to value all of nature’s services, these numbers are a “serious underestimate of infinity.” Posner summarizes these efforts by saying that applying BCA to catastrophic risks confronts “a host of obstacles” but is still “invaluable in cutting through the psychological and political fogs that surround and obscure the terrifying possibilities.” Posner adds that conducting BCA is itself costly, and may not be worthwhile for extremely low-probability risks. The question is not whether BCA is or could be perfect, but whether it is a better method for evaluating catastrophe-prevention measures than alternative approaches—and whether Posner’s BCA could yet be improved.

Nonetheless, Posner still finds that BCA recommends taking serious actions, even at significant cost, to prevent low-probability catastrophes. His book is a bold experiment in the use of BCA to favor risk protection and new government intervention, rather than to criticize and reject regulations. It thereby echoes Carson’s call to arms against pollution, now against catastrophe risks. And it shows that BCA is not methodologically skewed against regulation—just as the Office of Management and Budget, which traditionally used BCA only to reject costly agency regulations, has now innovated the “prompt letter” to use BCA to urge agencies to adopt beneficial new regulations. Given the low value of life that Posner employs, he understates the case in favor of protective interventions.

The most important quality of these two books, however, is neither the specific risks they assess nor the specific remedies they favor. It is that serious, thoughtful experts are saying that worrying about disaster is not crazy. Domsayers are typically dismissed as fanatics on the left (limits-to-growth alarmists crying wolf) or on the right (religious zealots who may even invite the end). Hollywood depictions of asteroid collisions and other disasters make them seem silly to the public. Michael Crichton, who has made a career of books that hype improbable calamities, has just written a novel complete with appendices to attempt to debunk the alarmists. But Posner and Diamond do not fit these extremist caricatures. Their texts are detailed and sober. Neither is a luddite; Posner ascribes some risks to rapid technological

change, but others he studies, such as asteroids, are not caused by technology (but will require technological solutions). Diamond is worried about social rigidity in the face of change. Posner is a conservative exponent of law and economics who is arguing that the *risks* of catastrophe, including abrupt global climate change (which some conservatives have labeled a “hoax”), are worth reducing, even at significant cost. That posture is especially persuasive precisely because it is not what narrow-minded pigeon-holers would expect. It is the counterpart to a moderate-to-liberal jurist writing a book arguing that the *costs* of risk regulation are worth reducing—namely, the book *Breaking the Vicious Circle*, written by Justice Stephen Breyer in 1993. Both Breyer and Posner are pragmatists who wish public decisionmakers would weigh the expected consequences of their actions.

Still, Diamond’s and Posner’s arguments are open to some questions. Posner’s BCA methods are often quick and crude, as noted above. Diamond’s research focuses mainly on islands, which may not be generalizable to modern open economies integrated into world trade and politics (though perhaps they generalize to the Earth as an island). The claim that people tend to disregard low-probability, high-consequence risks—which forms a key part of Posner’s argument in Chapter 2—is complicated (as Posner mentions in Chapter 3) by research by Paul Slovic, Elke Weber, and others finding that people sometimes neglect routine (high-probability) risks and *overstate* rare and dreaded risks.

Moreover, there are at least two major questions about the remedies for risks of catastrophe and collapse. The first is how to prioritize among the wide array of potential end-of-the-world scenarios. The number and diversity of such doomsday forecasts in the literature is bracing, as evidenced by Posner’s own extensive survey, Martin Rees’s *Our Final Hour* (2003), John Leslie’s *The End of the World* (1996), and Corey Powell’s article “20 Ways the World Could End” in *Discover* magazine (October 2000), as well as prior retrospective studies cited by Diamond such as Joseph Tainter’s *The Collapse of Complex Societies* (1988). The lower the probability of catastrophe that one is willing to consider, the greater the number of conceivable catastrophes. Indeed, as the probability asymptotically approaches zero, the number of imaginable scenarios approaches infinity. And if the end of all life on Earth is valued at infinity, rather than at \$600 trillion, then the expected value of the catastrophic risk is an infinitesimal probability multiplied by an infinite impact. These conundrums make priority-setting nearly impossible. Attempting to sort out which are “real” or “plausible” risks (remember the Y2K computer disaster?) can recapitulate the error that Posner seeks to avoid, of neglecting low-probability risks. At the same time, Posner worries that crying wolf—false positives—lull the public into inattention. Diamond argues that we must tolerate some false alarms in order to have warning systems sensitive enough to issue true alarms; zero false alarms would imply the failure to issue some true alarms. His calculus of optimal alarm accuracy is very similar to Posner’s BCA. Ex ante, the real question is not whether the risk is “real” or “true,” but whether the expected value of the low (but non-zero) probability multiplied by the catastrophic impact (with a premium for risk aversion) justifies some cost of prevention.

The second problem is that interventions to prevent one catastrophe may induce others (Graham & Wiener, 1995). For example, perhaps Posner’s greenhouse gas taxes would stimulate a switch from fossil fuels to another energy source such as nuclear fusion, which in turn might pose some very small but non-zero risk of catastrophe. Perhaps attempts to deflect an incoming asteroid could actually worsen the collision, or splinter the object into smaller but more numerous projectiles now even more likely to hit us, or bring back an alien pathogen to contaminate

Earth. Perhaps military intervention in Iraq to disarm state-backed terrorists could accelerate the recruitment of new terrorists, and could set off a period of chaos in which biological weapons are stolen. (Posner briefly recognizes this kind of problem in Chapter 3, but he treats risk-risk analysis as a form of partial BCA, rather than as the more holistic analysis of full portfolio effects it is. Diamond briefly mentions in chapter 14 that some solutions backfire, and repeatedly cites Barbara Tuchman's *The March of Folly*, but he neglects the possibility that collapse might ensue from misguided efforts to prevent risks.) Such risk-risk tradeoffs will not always be in the offing, nor will they always warrant rejecting the proposed intervention. Some interventions might also yield the ancillary benefit of reducing other risks. But if the problem is that low-probability high-impact risks are neglected, it would be ironic and mistaken to ignore the low-probability high-impact countervailing risks induced by interventions to protect against low-probability high-impact risks. A better approach is to weigh the tradeoffs among the portfolio of risks, and to seek risk-superior moves that reduce multiple risks in concert.

Ultimately, the question raised by both Posner and Diamond is whether and how institutions can be motivated to respond intelligently to risks of catastrophe and collapse. Diamond puts his hope in interdependence and long-term planning, but does not offer specific recommendations for institutional reform. Much research indicates that Diamond's concerns are often well handled by markets, norms, and institutions that do respond to signals of gradually rising scarcity. By contrast, Posner's concern is more worrisome because rare extreme events may strike with no advance signals or no time for institutions to adapt. Posner makes several specific and deliberately provocative reform proposals, including expanding research on potential catastrophes, investing in much better asteroid detection, canceling or modifying high-energy particle experiments, imposing catastrophe-risk review on new science projects, creating an international environmental agency and an international bioweapons agency, taxing greenhouse gas emissions to stimulate rapid technological change, and intensifying security measures against potential bioterrorists (including limiting some civil liberties). He hopes that BCA will help surmount the psychological and political obstacles to adopting such measures to prevent low-probability catastrophic risks. BCA might well persuade experts and funders to cancel particle accelerators and invest in asteroid detection. But solving abrupt climate change and bioterrorism (and stubborn resource depletion) will also require broader social changes and institutional innovations—perhaps learning, in part, from the success stories in Diamond's history. In this era of prosperity and longevity, Posner and Diamond may make it respectable to discuss disaster; the question is whether institutions can rise to the challenge.

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REFERENCES

- Breyer, S. (1993). *Breaking the vicious circle: Toward effective risk regulation*. Cambridge, MA: Harvard University Press.
- Carson, R. (1962). *Silent spring*. Boston, MA: Houghton Mifflin.
- Coase, R. (1960). The problem of social cost. *Journal of Law and Economics*, 3, 1–44.
- Demsetz, H. (1967). Toward a theory of property rights. *American Economic Review*, 57, 347–359.

- Ellickson, R. (1991). *Order without law*. Cambridge, MA: Harvard University Press.
- Graham, J. D., & Wiener, J. B. (1995). *Risk versus risk: Tradeoffs in protecting health and the environment*. Cambridge, MA: Harvard University Press.
- Hardin, G. (1968). The tragedy of the commons. *Science*, 162, 1243–1248.
- Leslie, J. (1996). *The end of the world*. London and New York: Routledge.
- Libecap, G. (1989). *Contracting for property rights*. Cambridge, U.K.: Cambridge University Press.
- North, D. (1990). *Institutions, institutional change, and economic performance*. Cambridge, U.K.: Cambridge University Press.
- Olson, M. (1971). *The logic of collective action*. Cambridge, MA: Harvard University Press.
- Ostrom, E. (1990). *Governing the commons*. Cambridge, U.K.: Cambridge University Press.
- Powell, C. (2000). 20 ways the world could end. *Discover*, 21(10), October 17.
- Rees, M. (2003). *Our final hour: A scientist's warning: How terror, error, and environmental disaster threaten humankind's future in this century—on Earth and beyond*. New York: Basic Books.
- Rose, C. (1986). The comedy of the commons. *University of Chicago Law Review*, 53, 711–781.
- Slovic, P. (2000). *The perception of risk*. London: Earthson.
- Slovic, P., & Weber, E. (2002). *Perception of risk posed by extreme events*. Columbia University Center for Hazards and Risk Research.
- Tainter, J. (1988). *The collapse of complex societies*. Cambridge, U.K.: Cambridge University Press.
- Tuchman, B. (1984). *The march of folly: From Troy to Vietnam*. New York: Alfred A. Knopf, Inc.