IN REVIEW

Revisiting the Cost of Life

REVIEW BY SAM BATKINS

Monetizing the value of either a human life or years of life has been a well-worn subject in academia over the years. From the countless pages of literature by former Office of Information and Regulatory Affairs (OIRA) administrator Cass Sunstein to the work of Vanderbilt professor Kip Viscusi, regulatory scholars have explored the topic in-depth. However, rarely does the existing literature make the *moral* case that valuing lives differently is unjust. That is the argument in *Ultimate Price* by Columbia University statistician and health economist Howard Steven Friedman.

Friedman teaches by anecdote and example about how individuals, corporations, and governments explicitly and implicitly place a value on life. In previous literature, this discussion can wade deep into the weeds and leave "the uninitiated" with a feeling they were mired 400 pages into a dense regulatory impact analysis. Friedman takes a different approach: he opens the book with an anonymized example of 9/11 victims: their network, income, family, and potential future earnings. When it came time to compensate their families through the September 11th Victim Compensation Fund, each "payout" reflected various socioeconomic factors. That conflicts with one of the central arguments in *Ultimate Price:* "all lives are worth the same." The complexities of following this ethic in practice—especially in the regulatory world—make it more difficult to enforce than it is to write, but Friedman's tour through the value of life is an excellent work for those willing to dip their toes into these regulatory waters without drowning in the scholarship.

Legality of life / Most voters would likely revolt at the idea that life can be assigned a monetary value. Especially revolting is asking parents to place a value on the lives of their children. Despite this impulse, Friedman demonstrates that consumers and even the justice system routinely quantify and monetize life. When we buy life insurance or a car without certain safety features, and when a civil jury is asked to compute compensatory damages, there are implicit and explicit values on life in common activities.

To explain this, he uses a real-life civil case over the accidental drowning of a disabled patient at a New York state mental institution. The patient had no lost earnings, no insurance, and no nest egg, so the initial case was dismissed with no damages awarded. However, one judge condemned the ruling, writing, "The ultimate scandalous irony is that had [the decedent] been chattel rather than a human being, Claimant could recover the lost value of her property. It is repugnant to the Court to have to enforce this law which places no intrinsic value on human life." Contrast this case to the $33.5 million awarded in 1997 to the families of murder victims Nicole Brown and Ronald Goldman and it is easy to see that some institutions in the United States place vastly different values on human life.

The benefit–cost state and life / At its core, *Ultimate Price* is not about the regulatory state but the overall value society and government place on disparate human lives. However, that is seen partly in the laws and regulations that put a value—often implicitly—on life.

Friedman identifies nine steps for a comprehensive benefit–cost analysis, including selecting measurement indicators, predicting costs and benefits over time, obtaining a net present value, and performing a sensitivity analysis. That, of course, is in an ideal world. The reality is that "perfect" benefit–cost analyses are unicorns in the regulatory arena and courts and regulated entities often fault agencies for either errors in their analysis or failure to properly follow the Administrative Procedure Act. For example, even though the regulatory process on the federal level costs tens of billions of dollars annually, the use of deadweight loss calculations for that money can be counted on one hand during an entire presidential administration. Political forces, resource constraints, and a host of other factors often prevent the "perfect" benefit–cost analysis.

For Friedman, the inputs and outputs of a regulation should include not only financial factors but also "more diverse items, including the environment, health, crime, and quality of life." Of course, veterans of the Obama administration's regulatory wars can recount executive agencies considering factors like the environment, public health and safety, distributive effects,

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and equity. Barack Obama's Executive Order 13563 requiring these considerations was somewhat controversial at the time but there was little doubt those factors were already being included in regulatory considerations. The Trump administration may have quickly abandoned this type of decision-making, but the next president can readily reinstitute it on the first day in office. Friedman cites EO 13563 but does not give it much consideration—again, because *Ultimate Price* is less of a regulatory treatise than a moral case for why society should treat all life equally.

Ultimate Price: The Value We Place on Life

By Howard Steven Friedman

232 pp.; University of California Press, 2020

A point on which many can agree with Friedman is how federal agencies monetize the value of a statistical life (VSL). Currently, different federal agencies use different VSLs and the differences between them can be more than a million dollars. According to Friedman, these differences do not make sense, a point echoed by Sunstein; both have urged policymakers to abandon the process of monetizing lives differently at the regulatory level. Indeed, even a cursory examination of the *Federal Register* reveals one Coast Guard rule placed the VSL at $9.6 million while a Trump administration transportation rule put the value at $10.4 million. Past estimates have shown even wider cleavages. Friedman argues an equal VSL across agencies is logical and—more importantly—just.

Discounting / Some regulatory scholars might disagree with Friedman on the use of discount rates when considering future costs and benefits. OIRA typically employs discount rates of 3%–7% but has used lower rates for events that are likely to take place in the distant future (like the effects of climate change).

Generally, Friedman is no fan of discounting present benefits. He notes that under existing practice it might not ever pay to spend a small amount now to prevent a global environmental catastrophe that happens far out in the future. That has not stopped regulators from trying, however, and they have routinely used rates under 3% to help justify climate change rules.

He provides a helpful example for mathematically challenged readers: $1,000, discounted at 7% over a 100-year horizon generates a present value of just $1.15. If the goal is to avert a distant but enormous disaster, using any discount rate above 3% makes that task almost impossible within the limits of benefit–cost analysis. However, a future administration dedicated to combating climate change could easily employ lower discount rates to pass new regulations.

When companies calculate / Virtually every regulatory book that deals with the VSL must mention the Ford Pinto. The Ford Motor Company used benefit–cost analysis to decide not to redesign the car's fuel system when, in the early 1970s, it was found to be vulnerable to fire in certain collisions. This decision probably set general approval of corporations back decades.

Friedman spends time discussing the Pinto. He also ventures into generalizations that might upset some readers of these pages: "External costs are ignored when companies perform cost–benefit analyses." Some will surely bristle at that statement. Corporate reputations—especially today—are often just as important as profits and earnings per share. There are, of course, plenty of risk-averse companies that consider possible externalities and the backlash of putting unsafe products on the market. Given the myriad of products and services on the market, are the Pinto and the 2008–2015 Volkswagen emissions scandal the rule or the exception?

The book also ventures into corporate pay and the gap between high-earning chief executives and the median worker in their firms. Courtesy of the 2010 Dodd–Frank Act, most large companies are required to compute the median pay of all employees—including any outside of the United States—and compare it to the pay of the company's CEO. Before the regulation, there were several estimates of the median pay ratio, ranging from 200:1 to 344:1. When the official figures were released, the numbers were deflating for those who had alleged sky-high ratios: according to research from Harvard, the ratios ranged from 70:1 to 166:1. Friedman appears to have missed that finding, writing, "Extreme ratios in the United States indicate that companies value the time of their CEOs hundreds of times more than that of their average workers." The figure is closer to a hundred rather than "hundreds," but the pay ratio is an easy target when discussing the value of work and the value of life. The ratio might be extreme for some companies, but it often is not because of extreme CEO pay, but more so the nature of each company. At the company with the highest recorded median pay, the ratio is just 6:1. Is that too high or too low? Is the work of the employees overvalued at this firm? No, but it is nearly impossible for regulators and scholars to discern for the rest of the world what the "correct" ratio is for business.

Equal protection / The book ends with a simple plea: we should treat all lives equally. This does make intuitive sense, whether for corporate America, juries, or regulatory benefit–cost analyses. From a political perspective, it is also far more defensible than valuing some lives differently. Just ask the George W. Bush administration about the "Senior Death Discount."

For some reason, benefit–cost analysis is still a controversial topic on Capitol Hill and in some regulatory circles. Friedman notes this controversy might quiet a little if the VSL treated all lives equally. He implores regulators to incorporate benefit–cost analyses in regulatory planning. This is already occurring, of course, although the quality varies from administration to administration and agency to agency. However, Friedman would borrow a few

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qualities from EO 13563 and incorporate "ethics, politics, and fairness."

Some might argue whenever politics are inserted, ethics and fairness will surely be tossed out the window. Given that the vast majority of the regulatory state is overseen by political appointees at OIRA, the Office of Management and Budget, the White House, and the sundry agencies that promulgate rules, it is natural to assume "ethical" considerations might slip from time to time. However, we can also assume the regulators tasked with writing regulations think they are acting ethically. Whether those specific ethics are shared by political appointees and the public is another matter.

Conclusion / Friedman's book is an excellent tour of how society and regulators value life. Often, the public does not pay much attention to this process—until someone makes a mistake and there is public outcry. Whether it is valuing lives of 9/11 victims or Pinto burn victims, *Ultimate Price* demonstrates the value we place on life is more widespread than we would care to admit. Whether regulators heed his advice and adopt a uniform VSL across all people and agencies is far from certain. R

A Useful Introduction

REVIEW BY ART CARDEN

George Stigler: Enigmatic Price Theorist of the Twentieth Century explores what we know about Stigler the man and Stigler the scholar as well as the intellectual and institutional legacy he left behind. I laughed out loud at a problem I know all too well when I read the dedication by the book's editor, economist Craig Freedman, to his "daughters Emily and Nicola who neither know, or care to know, who George Stigler might be." Those of us who *do* care will find the book to be a very useful companion to Stigler's works and studies of 20th century classical liberal political economy.

Stigler (1911–1991) was a titan of the 20th century economics profession and especially of the vaunted Chicago School of the 1960s and '70s. He grew up in the Seattle suburbs, earned a bachelor's degree from the University of Washington and a master's in business from Northwestern University, and then got his doctorate from the University of Chicago in 1938. His long career included stops at Iowa State, Minnesota, Brown, and Columbia before he returned to the University of Chicago in 1958. He wrote a long series of influential books and papers that earned him the Nobel economics prize in 1982.

The man / The book is interesting in that it combines a collection of essays with a series of late-20th century interviews. The editor conducted the interviews with Stigler's student Mark Blaug and his former Chicago colleagues Sherwin Rosen, Ronald Coase, Milton and Rose Friedman, Aaron Director, Stephen Stigler (George's son and a statistician at the University of Chicago), and George's longtime assistant Claire Friedland. The picture of him that emerges is complex and sometimes tragic.

Stigler had a famously sharp wit and was always ready with a joke that usually came at someone's expense. That was emblematic of the famously brutal—some would say toxic—Chicago seminar culture. Some of the interviews, particularly those with the Friedmans, suggest that his caustic wit masked deeper insecurities and kept people at bay. Blaug describes him with some justification as "a bully." He was as competitive in the seminar room as he was on the tennis court and that often got the best of him. The interviews suggest that he was aware of his boorishness; however, he never developed a filter.

One of the ironies of his life and career is that *homo economicus*, the purely self-interested, optimizing sociopath who inhabited Stigler's models, seemed to be noticeably absent from the way he lived. He was generous and warm with his family and those very close to him, but few people were close to him. Friedland, who worked for him for some 33 years, said she never really knew Stigler. In her words,

> A student once asked me what was "beneath George Stigler's hard, sarcastic exterior." How could I resist answering "A hard, sarcastic interior"? In reality, it was a question I couldn't answer at the time; it had been only 10 or 15 years that I'd been doing research for, and with, George. Today I think I'd respond "Sarcastic? Well, yes. But hard? No, I don't think so." Although I had often said that George was irrationally rational, in certain areas he was irrationally generous.

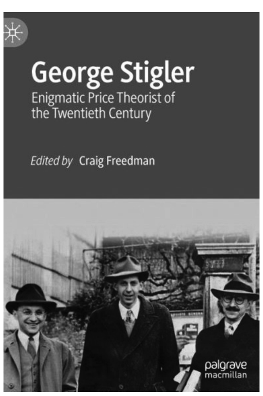
Race / Here, a digression of sorts is in order. The biographical information and interviews are of interest in part because of some recent controversy regarding Stigler's views on race. This stems from the circulation of his 1965 article "The Problem of the Negro" that appeared in a Young Americans for Freedom publication. The piece is "cringey," as one observer pointed out, but the existing body of scholarship on Stigler as well as his own work do not offer much (if anything) to suggest that race played a meaningful role in his ideology, worldview, or economic analysis. Via email, one of his former Chicago colleagues expressed surprise that he even had views on racial matters. The timing of the piece matters, I suspect: it is dated December 1965. That is nine months after the release of *The Negro Family: The Case for National Action*, also known as the Moynihan Report, which I believe is the basis for Stigler's article.

His thesis in the article, albeit crudely defended, seems innocuous: self-improvement rather than resentment is the way to overcome historical obstacles. While he apparently "didn't think that much of" his student Thomas Sowell—a prominent black economist—that does not seem very surprising because he "didn't think that much of" *anyone* and was not at all shy about it. Is this a neglected container of spoiled God-knows-what in the back of his intellectual and moral refrigerator? Yes. Is it some sort of hidden key to Stigler's ideas showing that they need to be completely reinterpreted? I very seriously doubt it. The essay will be useful as a pretext for people to dismiss ideas they already do not like, but I do not think it adds much to our understanding of his work.

The only time race comes up in *George Stigler* is in the economic historian David Mitch's discussion of the search for someone to assume the Walgreen Chair for the Study of American Institutions. In vetting Robert Fogel, who eventually replaced him, Stigler consulted a lot of historians to determine whether the controversy over Fogel and Stanley Engerman's 1974 book *Time on the Cross* had discredited him. One of the historians Stigler consulted was his Chicago colleague John Hope Franklin, who apparently "got along well" with Fogel but accepted "the arguments of some critics (e.g., [Paul] David, [Peter] Temin, [Richard] Sutch)." Stigler helping lure Fogel back to Chicago might someday be taken by some as evidence of Stigler's racial animus, but this is speculation about a vein of research that other scholars are still working on. We will know in a few years.

His work / Stigler made important contributions to industrial organization, the economics of information (which he considered his most important work), the economics of regulation, and the history of economic thought.

He is also famous for formulating what we now know as the Coase Theorem, derived from Ronald Coase's 1960 article "The Problem of Social Cost." As the essays collected by Freedman argue, what Stigler reported was not really a theorem, and Coase himself argued that it was not really what he had been arguing. (French economist Elodie Bertrand quotes Stigler's version from the 1966 edition of *The Theory of Price*: "Under perfect competition, private and social costs will be equal.") Like Adam Smith, Coase was exploring knotty economic problems embedded in their social contexts. Stigler's "prudence and prices all the way down" approach certainly clarified some essentials in Coase and Smith; however, it missed the big picture. In this respect, the book's essays on Stigler as a reader and interpreter of Smith (one by Jeffrey Young and another by David Peart and Sandra Levy), David Ricardo (by Heinz Kurz), and Alfred Marshall (by Neil Hart) are especially illuminating.



George Stigler: Enigmatic Price Theorist of the Twentieth Century

Edited by Craig Freedman

815 pp.; Palgrave Macmillan, 2020

The relationship between the Chicago School and the Virginia School gets a welcome treatment, with essays by Gordon Brady and Francesco Forte, Peter Boettke and Rosolino Candela, and Richard Wagner. These chapters, I suspect, are already forming the core of someone's dissertation on the relationship between Chicago and Charlottesville.

Stigler and Buchanan were both students of Frank Knight at the University of Chicago. One of the interesting puzzles—albeit unresolved, I think—is why Stigler in his article "The Theory of Economic Regulation" builds a public choice argument but without citing or acknowledging any of the obvious contributions that had been developed before. Mancur Olson's *The Logic of Collective Action* is a notable exception, but (for example) Gordon Tullock's Nobel-worthy "The Welfare Costs of Tariffs, Monopolies, and Theft" is conspicuously absent. This seems to undermine the argument of Edward Nik-Khah and Robert Van Horn that there was an "echo chamber" strategy at play during the rise of neoliberalism in the 1970s and '80s.

There is an unresolved puzzle that weaves its way through the book. Stigler certainly had a classically liberal "pre-analytic vision," to use Joseph Schumpeter's term, but it is not at all clear why research implicitly assuming that equality is desirable is any less "ideological" than research implicitly assuming that economic liberty is desirable. Nik-Khah and Van Horn argue that the scholars gathered at the first Mont Pelerin Society meeting "were wounded by the Great Depression and its aftermath, culminating in the rise of the welfare state." This is puzzlingly similar to a lot of other contributions to 20th century intellectual history that put the Great Depression and reaction to the New Deal at the center of the story while ignoring some very large elephants in the room, namely, the fact that the world in 1947 was fresh off the defeat of European fascism (which had waged an outright war of extermination on the Jews) and the triumph of Eurasian communism (which would go on to wage implicit wars of liquidation and starvation in the Soviet Union and China). Perhaps those who joined Friedrich Hayek were right to be concerned that civilization itself hung in the balance.

Conclusion / *George Stigler* is two books mashed together. Freedman's essays alone could be extracted, revised, and republished as a standalone volume on Stigler. The collection is not a book to be read straight through: as edited collections tend to do, it suffers from a lot of repetition. The footnotes are long and digressive, and as a member in good standing of the "footnotes are for references only" school of *Economical Writing* (to borrow from Deirdre McCloskey), I find myself wishing these discussions had been incorporated into the body of the text.

If I can be puckish for a moment: I was intrigued to learn about the intellectual exploits of "Frank Buchanan" (actually, James Buchanan) and the contributions of "Dixon and Stiglitz" (actually, Dixit and

Stiglitz). But as Sowell has said, if there is ever a nuclear war, the only survivors will be cockroaches and typographical errors. At 800+ pages, *George Stigler* will at the very least be useful for fighting off those post-apocalyptic bugs.

But even if nuclear annihilation tarries, people will find the book to be a very useful introduction to and explanation of Stigler's ideas and the man who generated them. I suspect that future students and scholars looking to better understand him and the Chicago School will start here. If so, they will have made a good choice.

A Menu for What Challenges the Grid

REVIEW BY WILLIAM F. HEDERMAN

Power After Carbon is Peter Fox-Penner's second book addressing the challenges of modernizing the electric power grid. His first book on this topic was *Smart Power* (Island Press, 2010) and it sparked many important discussions regarding the grid, climate change, and utility policy.

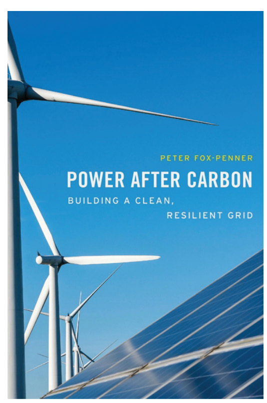
Fox-Penner is one of the world's preeminent analysts regarding electric power regulation. In *Power After Carbon*, he takes on a complex and rapidly changing and challenging policy topic and makes a valiant try at giving it a comprehensive analysis. He examines many important issues that require attention if society elects to accelerate carbon emission reductions through greater electrification of transportation and other end uses for energy. This book provides a useful introduction for diligent novices and a somewhat useful reference work for practitioners of electric power policy.

One of Fox-Penner's major conclusions is that the bulk power electric grid—what he calls the "Big Grid"—will be an essential part of post-carbon power systems. This contrasts with many sustainable-electricity proponents who anticipate decentralized renewable power replacing the grid. His reasons for seeing no rapid "euthanasia" for the Big Grid are convincing. He does, though, note that it is not quite "case closed" for a continuation of the grid, mentioning that, in considering downsides from new grid architectures, reliability may decline for bigger grids.

Decentralized options, whether renewable generation or demand-response technology, can in many circumstances create new cyber vulnerabilities. For decentralization to function well, highly connected control systems are necessary. Control systems are especially vulnerable to sophisticated cyberattacks. Moreover, malevolent cyber actors include highly capable adversaries consisting of hostile nation states and corporate criminals working independently or as mercenaries for nation states.

When costs are competitive, the big grid/small grid conundrum ultimately is a tradeoff between dangers from cascading failure for the Big Grid or from massive targeted hacking of small grids.

Another critically important element of centralized versus decentralized design decisions is sunk cost. In areas without a grid, primarily Africa, simple electric uses (e.g., lighting, phone recharge, fans, and limited refrigeration) may be served most economically with decentralized "bottom up" resources such as low-head hydropower, photovoltaics, or wind. As demands grow, however, storage and small grid buildouts may become necessary or economical. If, however, demands grow near Big Grid assets, being able to take advantage of hardware and software that has already been paid for on the existing grid can shift many advantages toward using the grid network's transmission lines and generators as well as storage.



Power After Carbon: Building a Clean, Resilient Grid

By Peter Fox-Penner

456 pp.; Harvard University Press, 2020

Grid threats / Fox-Penner spends considerable time explaining some of the major threats to the Big Grid (e.g., wind, fire, water, and cyber). He explains how changes in the global climate can adversely affect the grid (for example, outages and large-loss events), and some of the promising workarounds (for example self-healing grids). Much of the increase in financial losses from environmental catastrophes have come because of continued investment in inappropriate, dangerous, and vulnerable areas. Think of the real estate burned in remote California wildfires or the lush vacation homes and tourist infrastructure destroyed by hurricane winds and storm surges along the Atlantic and Gulf coasts.

I was disappointed to see no discussion of these "extenuating circumstances" in *Power After Carbon*. Consider the case of Breezy Point in New York City, which became a poster child for communities destroyed by Super Storm Sandy in 2012. In the 1950s and '60s, that area was a favored destination for persons from my Brooklyn neighborhood, especially the fortunate families that had bungalows there. All the bungalows had no ground-level living space; those homes were about 10 feet above the sand on wooden stilts and decks. Most living spaces were less than 1,000 square feet. The reason for this was clear: there were storms that caused "the ocean to meet the bay," inundating this sandy, low-lying westernmost tip of Long Island. I personally recall at least two times during hurricane season when this happened. It was fascinating to see—if you did not live there.

Apparently, as hurricanes quieted down along the Northeast coast in the 1970s and ’80s, persons started building year-round homes to replace bungalows at Breezy. Sandy destroyed most of those newer homes. Fortunately for many of the owners who did not have flood insurance, some fires occurred during the heavy rains, triggering fire insurance coverage. All that “destroyed value” of actual year-round housing should never have been built there. Now, it has been rebuilt.

Fox-Penner provides a useful overview of the opportunities, challenges, and tradeoffs that face those working to reduce carbon emissions from the electricity sector, both today and as it grows through electrification measures. I strongly recommend this book to anyone new to this field who wants an objective and knowledgeable overview.

Inadequate attention / Before doing “deep dives” into some of Fox-Penner’s discussions, I want to compliment some of the structural techniques that he uses in the book. For example, he provides several tools for analysts and other researchers to use:

- Appendix A lists the 41 policy recommendations he offers in the book. (My primary policy recommendation is to never have more than six recommendations.) The large number of recommendations would be totally lost without this innovative device of a policy summary at the end of the main body of the book. I think that he wisely judged that this list would have made no sense before the policy discussions.
- Three other organizing devices beyond the Table of Contents also help the analytic reader: annotated footnotes (43 pages), a reference bibliography (58 pages), and a traditional index.
- An expanded discussion of electric energy spot markets with increased wind and solar generation and an appendix (C) provide extended notes on a graph he created of electric demand forecasts from deep decarbonization studies.

All these elements of the book are user-friendly to a practitioner.

With that said, I do have an overarching criticism: some topics did not receive adequate attention. Admittedly, several of these topics are complex. I want to bring some additional information to their discussion.

There are five issues that are of particular importance for the future of power:

- technology innovation
- roles of energy service companies (ESCOs)
- roles of markets, traditional rates, and performance-based rates
- carbon pricing
- cybersecurity

Unfortunately, these do not receive adequate attention in the book. I offer a few thoughts on these topics below.

Technology innovation / Technology innovation is a pillar for much of what the author addresses in *Power After Carbon*. Without new, enhanced renewable options, there would be little point to this book. I think Fox-Penner did not bring several important observations to his treatment of this subject.

First, there is too much reliance given to the Bill Gates Mission Innovation (MI) program, announced with much fanfare at the Paris Agreement on Climate Change in 2016. Gates certainly deserves credit for his effort to accelerate the pace of energy technology innovation. Unfortunately, he (and perhaps Fox-Penner) makes the same mistake many tech company investors have made, relying too much on government research and development, largely through the national laboratories (NLs), to advance commercialization of energy technologies. In my experience working with the NLs, there are many bright minds at work, but they seem more intent on identifying ideas and funding for decade-long research programs than on quickly advancing a technology and leaving the NL to get their technology to market. As a senior adviser on energy markets in the Obama administration, it appeared to me that Gates and his team had a well-meaning but naïve understanding of the challenges of federal R&D. Ultimately, Gates prevailed with the power of the potential billions of dollars he brought to the table. In return for the promise of future billions of “patient capital,” he demanded a doubling of national R&D expenditures (by about $20 billion) on advancing new energy technologies to a commercial-ready stage. As a member of the RAND Corporation’s pioneering team that examined how to advance energy technology decades earlier, I realized how limited the odds of success were for this approach. It was more Mission Impossible than Mission Innovation.

A path superior to bloating federal R&D spending would be for investors with serial success records to identify energy market needs and craft generous prizes for those who could meet the needs. For example, consider offering a $100 million “e-prize” for a 10-megawatt generating device that could easily be scaled up to replace nuclear and coal facilities and thus accelerate their retirements. This device could be any “black box” technology with zero net carbon emissions and other cost and pollution criteria. The investors would only incur expense if someone achieved the goal, a marked contrast from paying for decades of lab R&D that may or may not achieve any commercial success. While I have no doubt that the NLs can rapidly double their spending, the uncertainty around accelerated commercialization is high. Interestingly, recent federal energy secretaries have advanced some prize-based innovation programs.

Fox-Penner examines battery storage technology for solving important grid-scale problems. I think he should have devoted more time to non-battery storage options. (Disclosure: I have financial interest in non-battery technology). I recently (summer 2019) saw a thermal mass storage technology demonstrate commercial scale value (1 MW peak reduction) with support from the Energy Department’s Building-Grid Integration initiative. This technology has no capital cost (so the technology may be unpopular with some utilities seeking rate-base growth) and takes less than a month to install the necessary software in a building with Niagara "open source" technology. The "secret sauce" includes using the building's thermal mass (walls, ceilings, file cabinets, etc.) as the storage medium, meaning there is no cost and no degradation of performance after repeated cycles. In a million-plus square foot global headquarters for a global financial institution, this novel technology cost less than $50,000 to install and saved the host building more than $300,000 in the first partial summer. The building was a LEED-Certified Gold building before the project.

This kind of game-changing technology is already available for commercial scale implementation. It is not clear, however, that the commercial office building innovation ecosystem is ready to take advantage of the technology. The incumbent ESCO, for example, appeared to go to significant trouble to scuttle the project. Another, more prominent ESCO significantly and inaccurately dismissed the potential performance of the technology, and many risk-averse building operators would not take a risk on a novel technology.

ESCOs / Fox-Penner envisions ESCOs as "competitive providers of electricity and related services." He considers them a potential response to a "widely held view that today's utilities won't be capable of providing customers with the cutting edge, mass-customized products" necessary for highly functioning electricity markets.

In theory, ESCOs make profits by improving energy efficiency. Fox-Penner appears to accept that theory, which—if true—would align ESCO and client incentives. Real-world experience raises serious concerns with the key role he envisions for them in energy and grid technology innovation. For example, the Federal Energy Regulatory Commission's enforcement office has disciplined some ESCOs for manipulating electricity markets by fraudulently adjusting base-case usage to overstate savings they provide. In one case, a utility executive noticed the lights on midday at Baltimore's Camden Yards baseball stadium. Such unnecessary use would have allowed the ESCO to provide "savings" by turning the lights off after the base-case period was over.

Sometimes, ESCOs oppose new technologies because they could endanger preexisting arrangements with buildings. One ESCO in New York City is currently promoting ice storage systems to address the city's new Public Law 97, which requires major reductions in carbon emissions from buildings. While this approach may reduce carbon emissions, it will only do so at great cost to the building owners who make this choice.

A half-decade ago, when I investigated why the Federal Energy Management Program had such disappointing results, I learned from a former senior official at the Defense Department and General Services Administration that ESCOs working for federal buildings were extremely conservative because of the performance incentives they faced. Instead of encouraging them to try innovative ways to achieve greater savings, ESCOs became a barrier to energy technology innovation.

Markets / I oversaw the establishment of FERC's Office of Market Oversight and Investigations (OMOI) in the wake of the Enron scandal and subsequent less-than-ideal federal and state regulatory responses. OMOI's goal was to restore public, congressional, and market participants' confidence in these markets. Despite my dedication to restoring these markets to effective operations, I must confess that the near-constant need to intervene in these "organized markets" outcomes (e.g., the use of capacity markets to provide "missing money" to promote new investment for generation) raises the question of whether the outcomes are market outcomes or regulatory outcomes. I was disappointed that Fox-Penner did not address this issue.

No matter how much we want to believe markets are the best way to proceed, we do need to take real-world evidence into account. This book does not do so convincingly. Fox-Penner does speak to this issue when he examines performance-based rates, a mix of incentives for achieving market-like outcomes, but the question remains, in my mind, more open than he indicates.

Price for carbon / As yet, there is no consensus on the social cost of carbon. This hurts *Power After Carbon* by making it difficult (if not impossible) to assess the comparative performances of market versus regulated outcomes for electric network systems (Big Grid or otherwise). The book would have benefited from considering "next best" solutions that could work until the global community finds a consensus on a carbon price.

Cybersecurity / I cannot finish this review without raising the specter of the cyber threats to all electric grids. There are persistent, aggressive, and sophisticated cyberattacks attempting to harm the grids in all advanced economies.

Traditional grid operators have so far managed to prevent any major cyberattack from achieving major success (except for Ukraine in 2017). Unfortunately, it is near-impossible to determine whether "landmines" or "Trojan horses" have already been placed within our or our allies' systems by adversaries preparing the battlefield for future conflict or threats.

There are reasons to believe that the United States and other developed nations can assemble sophisticated and effective cyber defenses and launch devastating counterattacks. Nevertheless, deterrence through "Mutually Assured Chaos" does not appear to have the same respect that "Mutually Assured Destruction" had in the original Cold War versus today's Code War.

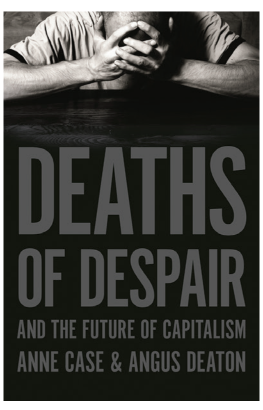
Conclusion / Fox-Penner has written a magnum opus for electricity regulators and other analysts working in this area. The book does not provide a roadmap of what we should do, but rather offers a sort of menu of options. This can help many regulators and market participants do their jobs more effectively and it will spark many potentially useful discussions. I hope these remarks add to those discussions. R

Blame Capitalism?

REVIEW BY DAVID R. HENDERSON

In their recent book *Deaths of Despair and the Future of Capitalism*, Anne Case and Nobel economics prizewinner Angus Deaton, both emeritus economists at Princeton University, show that the death rate for middle-age whites without a college degree bottomed out in 1999 and has risen since. They attribute the increase to drugs, alcohol, and suicide. Their data on deaths are impeccable. They are careful not to attribute the deaths to some of the standard but problematic reasons people might think of, such as increasing inequality, poverty, or a lousy health care system. At the same time, they claim that capitalism, pharmaceutical companies, and expensive health insurance are major contributors to this despair.

The dust jacket of their book states, "Capitalism, which over two centuries lifted countless people out of poverty, is now destroying the lives of blue-collar America." Fortunately, their argument is much more nuanced than the book jacket. But it is also, at times, contradictory. Their discussion of the health care system is particularly interesting both for its insights and for its confusions. In their last chapter, "What to Do?" the authors suggest various policies but, compared to the empirical rigor with which they established the facts about deaths by despair, their proposals are not well worked out. One particularly badly crafted policy is their proposal on the minimum wage.



Deaths of Despair and the Future of Capitalism

By Anne Case and Angus Deaton

312 pp.; Princeton University Press, 2020

The data / Case and Deaton start off on the wrong foot by claiming that the median inflation-adjusted wages of American men "have been stagnant for half a century" and that wages for white men without a college degree fell by 13% between 1979 and 2017. In a heavily footnoted book, they did not give a source for those two claims. But they almost certainly used the Consumer Price Index to adjust for inflation. The problem is that the CPI notoriously overstates inflation for that period. If we use the more accurate Personal Consumption Expenditure price index, which itself overstates inflation somewhat, we reach two very different conclusions: (1) wages of American men rose by 25% over that half century, and (2) wages for white men without a college degree, rather than falling by 13% from 1979 to 2017, actually rose by 4.5%. That last number is modest, but it is up, not down.

Case and Deaton get onto stronger ground by discussing what they know a lot about: death rates of Americans by age, gender, color, and presence or absence of a bachelor's degree. Their findings are shocking. They focus on the death rates of white, non-Hispanic men and women aged 45–54, which began falling rapidly around 1970 and reached its bottom in 1999. After that, though, it started to rise. Had the decline continued at its pre-1999 rate, the authors note, the United States would have avoided 600,000 deaths of mid-life Americans. Moreover, they note, mortality of middle-age people continued falling in France, Sweden, and the United Kingdom.

To understand what is behind the increase in the death rate, the authors look at state data and note that death rates increased in all but six states. The largest increases in mortality were in West Virginia, Kentucky, Arkansas, and Mississippi. The only states in which midlife white mortality fell much were California, New York, New Jersey, and Illinois. All four of the latter states, they note, have high levels of formal education. That fact leads them to one of their main "Aha!" findings: the huge negative correlation between having a bachelor's degree and deaths of despair.

To illustrate, they focus on Kentucky, a state with one of the lowest levels of educational attainment. Between the mid-1990s and 2015, Case and Deaton show, for white non-Hispanics aged 45–54 who had a four-year college degree, deaths from suicide, drug overdose, or alcoholic liver disease stayed fairly flat at about 25–30 per 100,000. But for that same group but without a college degree, the deaths in the same categories zoomed up from about 40 in the mid-1990s to a whopping 130 by 2015, over four times the rate for those with a college degree.

Why is a college degree so important? One big difference between those with and without a degree is the probability of being employed. In 2017, the U.S. unemployment rate was a low 3.6%. Of those with a bachelor's degree or more, 84% of Americans aged 25–64 were employed. By contrast, only 68% of those in the same age range who had only a high school degree were employed.

That leads to two questions. First, why are those without a college degree so much less likely to have jobs? Second, how does the absence of a degree lead to more suicide and drug and alcohol consumption? On the first question, the authors note that a higher percentage of jobs than in the past require higher skills and ability. Also, they write, "some jobs that were once open to nongraduates are now reserved for those with a college degree."

I wish they had addressed this educational "rat race" in more detail. My *Econlog* blogging colleague Bryan Caplan, an economist at George Mason University, argues in his 2018 book *The Case Against Education* that a huge amount of the value of higher education is for people to signal to potential employers that they can finish a major project and be appropriately docile. To the extent he is right, government subsidies to higher education make many jobs even more off-limits to high school graduates. Yet, Case and Deaton do not cite Caplan's work. Moreover, in their final chapter on what to do, they go the exact wrong way, writing, "Perhaps it is time to up our game to make college the norm?" That policy would further narrow the range of jobs available to nongraduates, making them even worse off.

On the second question—why absence of a degree leads to more deaths of despair—they cite a Gallup poll asking Americans to rate their lives on a scale from 0 ("the worst possible life you can imagine") to 10 ("the best possible life you can imagine"). Those with a college degree averaged 7.3, while those with just a high school diploma averaged 6.6. That is not a large difference, a fact they do not note.

Where the authors are at their best is in dismissing various suggested causes of these deaths that others have posited, in particular, increased poverty and growing income inequality. On poverty, they point out the obvious: the official poverty rate—the percentage of households below the poverty line—fell throughout the booming 1990s, increased slightly before the Great Recession and more quickly during the recession, and slowly declined afterward. Deaths from despair, by contrast, rose uninterruptedly and rapidly from the early 1990s on. The pattern just does not fit. As for increasing income inequality, state data do not fit the explanation. They note that New York and California have relatively high income inequality but have among the lowest mortality rates.

Why the despair? / So, what are the culprits behind the deaths of those without college degrees? Case and Deaton blame the job market and health insurance. Jobs for those without college degrees do not pay as much and do not generally carry much prestige. And, as noted above, Case and Deaton mistakenly think that real wages for such jobs have fallen. Some economists, by adding nonmonetary benefits provided by employers and by noting the amazing goods we can buy with our wages such as cell phones, conclude that even those without a college degree are doing better. Case and Deaton reject that argument. They do not deny that health care now is better than it was 20 years ago, but they write that a typical worker is doing better now than then "only if the improvements—in healthcare, or in better entertainment through the internet, or in more convenience from ATMs—can be turned into hard cash by buying less of the good affected, or less of something else, a possibility that, however desirable, is usually not available." They continue, "People may be happier as a result of the innovations, but while it is often disputed whether money buys happiness, we have yet to discover a way of using happiness to buy money."

That thinking is stunning. Over many decades, economists have been accused, usually unjustly, of saying that only money counts. We have usually responded by saying, "No, what counts is utility, the satisfaction we get out of goods and services and life in general." But now Case and Deaton dismiss major improvements in the happiness provided by goods and services by noting that happiness cannot be converted to money. That is a big step backward in economic thinking.

The strangest part of the book is their ambivalent attitude toward health care and health insurance. They start on the right track, writing that the American medical system "is nothing like a free market" and that highly regulated corporations seek protection from competition "in a way that would be impossible in a free market." One might then expect them to advocate freer health care markets, but they do not. Instead, they focus on two things: (1) how expensive health insurance is, and (2) patent monopolies granted to pharmaceutical companies. On the first, they argue correctly that the increasing cost of health insurance is one of the main culprits in the slow growth of wages. And they attribute the high cost of health insurance to high payments to health care providers. But wouldn't a good solution be to allow more competition in health care provision? To their credit, they criticize restrictions that exclude foreign doctors from practicing here. But they do not mention certificate-of-need laws that prevent medical providers from entering the market and driving down prices.

Ironically, Case and Deaton focus most of their fire on the monopoly restriction that has the most justification: drug patents. Without patents and with the maze that the Food and Drug Administration has created in the approval process for drugs, the flow of new drugs would slow dramatically.

Case and Deaton are outraged about Purdue Pharmaceutical producing OxyContin, which they call "legalized heroin." That outrage seems to shade everything they write about the pharmaceutical industry. For example, in discussing medication-assisted treatment (MAT) that helps people get off their addiction, they write, "It takes a strong stomach to watch pharma and their allies push MAT so that they can profit both by causing the epidemic and by curing it." Really? I would have thought that all it takes is an understanding of incentives. I am glad that some firms have an incentive to help people with their addiction. I wish that Case and Deaton were also.

In their final chapter on what to do about deaths of despair, they suggest expanding Medicaid and claim that would help people who are dealing with drug addiction. Maybe. But the 2020 *Economic Report of the President* argues that Medicaid and other government subsidies in the first decade of this century were one of the *causes* of the drug problem. Case and Deaton also inch up to advocating, without quite endorsing, a proposal for "universal health care." In doing so, they misquote Kenneth Arrow's 1963 pathbreaking article on health insurance, claiming that he wrote, "The *laissez-faire* solution for medicine is intolerable." What Arrow actually wrote is, "It is the general social consensus, clearly, that the *laissez-faire* solution for medicine is intolerable." A look at the paragraph in which that sentence appears shows that he is quite careful about drawing any conclusions himself. But a reasonable guess is that he showed some preference for certification of doctors, à la Milton Friedman, over exclusion through compulsory licensure.

The authors point out that a Universal Basic Income either would be way too expensive or, if it replaced the welfare state, would make many elderly and disabled people much worse off. They also argue that "small increases" in the minimum wage "do not cost jobs," but they cite *none* of the considerable literature that finds the opposite. Based on their reading of the academic literature, they recommend a gradual increase in the minimum wage from $7.25 an hour to $15. They do not say how gradual. If it is over, say, five years and if inflation over the next five years averages 3% (most economists believe it will be less than 3%), that would be a real increase of 78%. That is not a "small increase." It would certainly cost the jobs of many people whom Case and Deaton are concerned about. Also, one of the measures that would most help those without college degrees would be to scale back substantially the degree of occupational licensing. The authors mention that idea only briefly.

The authors are rightly critical of substantially higher taxes on high-income people, noting that many of them got that way by producing goods that other people wanted. Unfortunately, one thing missing from their proposals is the idea of increasing people's real wages by reducing the cost of housing. Economists know how to do that: abolish the restrictions that discourage residential construction. Harvard's Edward Glaeser and Wharton's Joseph Gyourko have shown definitively that housing prices in cities like Los Angeles, San Francisco, and New York are high not because of the scarcity of land but because of the scarcity of building permits. (See "Zoning's Steep Price," Fall 2002.) Case and Deaton criticize land-use regulations in one sentence, but never hint about the enormity of the problem those regulations cause.

In short, they are best at what they know best: death rates by age, race, and education. They are right to criticize some of the facile claims of causation made by others. They also, fortunately, do not blame capitalism as much as the book jacket suggests. Unfortunately, the policy proposals they focus on most either do not address the problem they want to solve or would actually make the problem worse. R

Many Different Sorts of Democracy

BY PIERRE LEMIEUX

Democracy is the natural way that humans have governed themselves in many different parts of the world since the beginning of history. So argues David Stasavage, a political scientist at New York University, in his book *The Decline and Rise of Democracy*. In doing so, he leads us on a fascinating voyage through time and place.

A wide definition of democracy sees it as a political system "in which those who rule have been obliged to seek consent from those they govern" through some sort of council or assembly. Rulers without strong state bureaucracies need assemblies because they face an insuperable information problem regarding what is produced and what can be taxed. They also face a tax collection problem. Moreover, pure coercive autocracy will not work if the subjects have an exit option to move out of reach of the rulers.

Early democracy / What Stasavage calls "early democracy" was characterized by councils or assemblies, a weak central state or sometimes no central state at all, and generally less than universal suffrage. Athens was "the most extensive example of early democracy" in the 5th and 4th centuries BCE. Other variants of early democracy were common in other, often primitive, societies. A sample of 186 societies studied by anthropologists—the Standard Cross-Cultural Sample—shows governing councils existing at the local level in more than half of the sample and at the central level (over many localities) in about a third. "By one estimate," writes Stasavage, "two thirds of councils had broad-based community participation"—as opposed to elites only.

For example, early democracy existed in Mari, a kingdom that existed on what is now the border between Iraq and Syria during the first millennium BCE. The king had to negotiate with town councils over taxes.

The Huron, a native tribe confederacy in the American and Canadian Northeast, provide a more striking and recent example. At the time French explorers encountered them in the 16th and 17th centuries, a Huron village was ruled by a chief and a council of clan chiefs. Anybody in the village apparently could go and express his opinions to the council. Villages were grouped into tribes, each of which was governed by a tribal chief and a council made of all clan chiefs. Above them was the confederacy council, but its decisions did not bind individual tribes, thereby promoting consensual decision-making. Iroquois tribes had similar institutions.

Early democracy was also practiced by pre-Islamic Arabs. *Sayyids* (rulers) generally ruled as first among equals. The arrival of Islam in the 6th and 7th centuries CE did not immediately change that. The Koran's governance principle of *shura* recommends consultation and consensus, which sometimes may have also applied to the choice of the caliph. The conquest of Iraq (and the Sasanian Empire), however, marked the beginning of the end of democracy in this part of the world as the Islamic caliphs inherited a well-functioning state that they could soon rule without assemblies. The same thing happened later to the Mongols, who abandoned their democratic habits after invading the Chinese Empire.

Early modern city-states in Europe as well as the American colonies practiced some forms of early democracy. Colonial governors, including those from London merchant companies (the Virginia Company, for example), needed to consult the colonists if only because labor was scarce

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and a plethora of available land offered an exit option. The rulers did not have bureaucracies to employ in their exercise of control. According to Stasavage, the promise of democratic rights attracted immigrants to America, probably (I suppose) as a symbol of individual dignity or a signal of mild governance. Governing assemblies with broad male suffrage developed with frequent elections and sometimes explicit instructions or mandates given to elected officials.

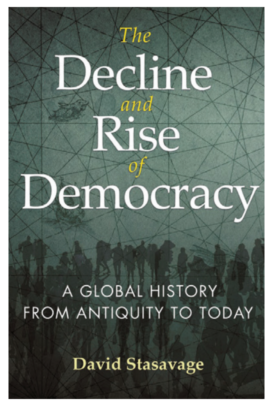
Early democratic societies were generally small-scale and, as suggested above, existed in an environment where residents had an exit option and there was no bureaucracy to help rulers tax production. A ruler therefore needed to negotiate to gain the consent of the people or the notables. In other words, democracy developed when political rulers were weak.

Conversely, early democracy failed when a ruler could easily tax production because agriculture was intensive and "legible" (that is, easy to monitor) or because the ruler employed a bureaucracy to help him. As illustrated above, a conqueror who inherited a state with an established bureaucratic hierarchy could avoid democracy simply by co-opting the bureaucrats. Hence, the decline of (early) democracy.

Early democracy is often historically associated with "the absence of many technological developments that we commonly associate with civilization" such as writing, geometry, and accounting. The advance of civilization "often acted to undermine early democracy" as these technologies were used by the state bureaucracy and "reduced the information advantage that members of society had over rulers." Moreover, higher population densities made people "more easily monitored by bureaucrats."

There was no state bureaucracy in Europe after the fall of the western Roman Empire in the 5th century BCE, but early democracy continued at the local level. (See "Let's Travel That Road Again," Spring 2020.) Kings eventually convened central assemblies composed of what Bertrand de Jouvenel in *On Power* (1945) called "social powers": nobles, bishops, and later representatives of cities. The assembly or council participants had power bases independent of the state and thus "substantial blocking power." The king needed them to govern and tax.

Modern democracy / Modern democracy gradually replaced early democracy, hence the rise of democracy after its fall. Modern democracy was a European invention. It consists of a new kind of assembly whose members are elected by extended suffrage and are not tied by mandates or instructions from those they represent. In other words, modern democracy is representative democracy with more widespread suffrage.



The Decline and Rise of Democracy: A Global History from Antiquity to Today

By David Stasavage

424 pp.; Princeton University Press, 2020

It developed fastest in Britain. The 11th century Norman conquerors inherited the country's different kingdoms, which had royal councils and assemblies of local notables. At the end of the 13th century, however, the king was able to abolish the mandates in the central assembly, which eliminated much blocking power. The Tudors, who reigned from 1495 to 1603, even made progress in creating a bureaucracy.

Elsewhere in Europe, absolute monarchs (think of Louis XIV) were better able to reduce the role of councils and assemblies, but still needed them to govern. Prussia under the Hohenzollerns was an exception. Frederick William of Prussia created a permanent army that allowed him to rule without negotiating with assemblies. Except for Prussia, Stasavage tells us, European states were still "relatively weak."

Economic historian Douglas North and political scientist Barry Weingast argue that the Glorious Revolution of 1688 created a limited state in England. But Parliament became sovereign and its executive ("the Ministry") gained something akin to autocratic power. William Blackstone, the famous 18th century jurist, observed that Parliament has "absolute despotic power" and can "do every thing that is not naturally impossible." Royal despotism had been replaced by parliamentary despotism. For Stasavage, though, this "state capacity" was necessary for democracy to develop, a challenging idea to which we will return.

The first fully modern democracy was born in the United States in 1787, albeit with slaves and women excluded from the suffrage. France rapidly followed, with no slavery. The formula then spread over the world and the franchise was gradually extended. Universal suffrage often came with universal conscription. Stasavage emphasizes that modern democracy recently extended to many countries in Africa, which had a pre-colonial tradition of early democracy.

Democracy and autocracy / China was an extreme case of autocracy, the opposite of the European tradition. If the Chinese ever knew early democracy, it was in the municipal assemblies of the Eastern Zhou dynasty, in a frontier area, around the beginning of the first millennium BCE. This early democracy did not last long. After the fall of the Zhou dynasty, the empire was eventually restored and went on to build a strong bureaucracy that could dispense with popular consultation.

At the apogee of the Han dynasty, at the beginning of the first millennium CE, there was one bureaucrat for every 440 subjects in the empire. It is, writes Stasavage, "an astonishing figure for a pre modern society." We can add that it is a very low figure for a modern democracy: in the United States, which is at the low end of government bureaucracies in the rich world, public employees at all levels of government translate into one bureaucrat for 15 residents (about one for 37 at the federal level only).

The story told by Stasavage is fascinating and we might inquire, as he does, about the lessons to draw for today's democracy and its future. We will have to tweak his ideas a bit. The distinction between early and modern democracy is useful but it hides other aspects of democracy that we should take into account. Etymologically, democracy means the power (*kratos* in Greek) of the people (*demos*). But this does not tell us what the scope of this power is nor who are the people.

Not a value per se / These many democracies do not have the same moral value and economic consequences. Stasavage is not only a dispassionate scholar but also, as he admits, "a supporter of democracy." He believes in "the core principle that the people should have power." The value judgment thus expressed seems consistent with the historical claim that "participative needs … are intrinsic to humans." However, participation in essential governance, such as building a palisade, an irrigation system, or a flood control levee—is very different from exploiting minorities in a pure majoritarian government. Alexis de Tocqueville's "tyranny of the majority" or de Jouvenel's "totalitarian democracy" are difficult to justify morally. Socrates was condemned to death under Athenian democracy.

Stasavage identifies a "democratic anxiety" stemming from the thin participation of citizens in modern democracy and the danger of the executive power high-jacking democracy, including in the United States. He notes the "tremendous expansion of the ability of presidents to rule by executive order." Presidential powers, he explains, "have sometimes been expanded by presidents who cannot be accused of having authoritarian tendencies, such as Barack Obama, only to have this expanded power then used by Donald Trump." We could, or course, as well say that the new powers grabbed by Trump will likely be used by a future Democratic president "who cannot be accused of authoritarian tendencies," or perhaps who might legitimately be so accused.

Stasavage remains optimistic for America, probably because of what he calls the issue of sequencing in the history of democracy and autocracy. The fact that, in America and in the typical Western country, democracy came sequentially before the construction of a powerful bureaucratic state gives more chance to democracy against would-be strongmen.

Yet, let us remember the many cases in which dictators were elected or plebiscited, from Napoleon III in France (with 74% of the vote) to Hugo Chávez in Venezuela, and even in a sense to Adolf Hitler in Germany. Recently, a troubling trend has shown would-be strongmen elected in the West, such as Viktor Orban in Hungary, Jair Bolsonaro in Brazil, and Trump in the United States. A would-be strongwoman (there is such a thing), Marine LePen, could continue to rise in France. Democratic majorities, including in the United States, have often repressed minorities: think about the African Americans or the interned Japanese Americans during World War II. (See "You Didn't See It Coming," Winter 2018–2019.)

When he leaves the field of purely positive history, Stasavage seems to consider democracy as a value per se. If, as he tends to, we give a very large extension to the concept of democracy as a regime that gives some participation in government to at least some of the people, and if we define autocracy as all other regimes, it looks difficult to oppose democracy. But this definition hides the many varieties of democracy within and across Stasavage's early democracy or modern democracy.

Unkeepable promises / Democracy as a value per se is not only morally suspicious, but its modern form certainly cannot deliver the participation it promises. The typical individual voter remains rationally ignorant of the political stakes because, if he is not totally deluded or ignorant, he knows that his own vote has an infinitesimally small probability of changing the election outcome. Why invest time and money in information if he cannot do anything to further his own interest? Consequently, most voters vote blind, a fact demonstrated by multiple opinion polls about voters' ignorance.

Another reason why modern democracy cannot deliver meaningful participation is the nonexistence of what economists call a "social welfare function." Nobel economics prizewinner Kenneth Arrow has shown that, if every individual is given an equal weight, it is impossible to aggregate all individual preferences or values and obtain coherent choices. A manifestation of this impossibility theorem is the phenomenon of cycles or voting incoherence: even if no individual changes his mind, the majority could prefer *A* to *B*, *B* to *C*, and *C* to *A*. Not to mention that, as Hayek noted, "different but equally justifiable procedures for arriving at a democratic decision may produce very different results."

A related (but different) argument on the illusion of democracy as participation is the observation that in any nontribal society made of individuals with different preferences, virtually any collective choice must violate the preferences of some individuals and is therefore discriminatory, as Anthony de Jasay noted in his 1985 book *The State*. The "virtually" keeps the door open to unanimously desired choices, which are necessarily abstract rules instead of specific decisions. (See James Buchanan's 1975 book *The Limits of Liberty: Between Anarchy and Leviathan*.) Thus, in any nontribal society, the state has to be distant and distrusted.

These limitations of democracy are ignored in *The Decline and Rise of Democracy.*

Democracy and liberty / If democracy is not a value per se, it may be an instrumental value serving to achieve some other value. In the classical-liberal tradition, this ultimate value is individual liberty, or individual consent, or a social order in which individual liberty is possible. As Nobel economics prizewinner Friedrich Hayek argued, democracy is not a means of reaching collective decisions on everything, including deep philosophical issues, but merely a procedure for electing and removing governments. (See his 1979 book *Law, Legislation and Liberty, vol. III: The Political Order of a Free People*.) Democracy may also have the symbolic advantage of affirming the formal equality of all individuals.

In this perspective, there is a distinction more important than early and modern democracy. It is the distinction between, on the one hand, democracy as participatory power and, on the other hand, democracy as a means to individual liberty. This distinction parallels the one made by Benjamin Constant between ancient and modern liberty—that is, between collective and individual liberty. (See Constant's 1819 lecture "The Liberty of Ancients Compared with that of Moderns.") Democracy as power corresponds to ancient or collective liberty; democracy as individual liberty corresponds to modern or individual liberty. This distinction cuts across the early and modern categories proposed by Stasavage. The French Revolution, which oscillated between liberation and tyranny, was representative of these two faces of the democratic Janus: individual and collective.

The conception of democracy as a protection for individual liberty distinguishes democracies from autocracies much better than does the conception of democracy as participation in power. Autocrats often call themselves "democratic," like in the "Democratic People's Republic of Korea." Similarly, Chinese communist leaders have often used the word "democracy" (*minzhu*) to describe their system. But autocrats obviously take democracy as meaning the power of the people (whom they incarnate, of course), not the liberty of the people viewed as individuals. As Stasavage himself suggests, an autocratic government—say, a Chinese emperor—ultimately needs the support of a majority or a large proportion of its subjects even if it is not expressed through formal elections. Such governments still do not qualify as democracies in the sense of individual liberty.

When Stasavage observes that "strong central state power is a core feature of modern democracy," he is taking democracy more in the sense of the power of the people than as the liberty of the people. It is far from clear that a strong central state with much "state capacity" is beneficial to individual liberty.

One argument for a strong modern democratic state is that early democratic assemblies could block economic development by restricting entry into markets instead of encouraging experimentation and innovation. The Dutch Republic's weak early democratic state was apparently prisoner to special mercantile interests. By contrast, Stasavage argues that the strong state being built in Great Britain in early modern times contributed to the Industrial Revolution Yet, he also seems to agree that it was mainly by creating the space for innovation that the British state was useful, not by its direct interventions. There is much theory and evidence to support the idea that economic freedom favors economic development and growth.

Democracy, autocracy, and growth / If a strong democratic state is necessary to promote development, why can't an autocratic state do it too? Such an argument for autocracy seems to be bolstered by the case of China. If economic historians' estimates are correct, China had a greater gross domestic product than Europe until about 1600. It is only later that the West overcame China in growth and prosperity. Why can't innovation persist within a Chinese-style autocratic bureaucracy?

Stasavage suggests that the political instability of autocracy and "the risk of policy reversal" may be the answer. Note that the current wave of populism suggests that strong-state democracy may not be immune to these problems.

Large autocratic empires often benefit from a large internal market with transportation and communication infrastructures and relatively unimpeded trade. This advantage, however, does not require autocracy. Modern democratic countries have it too.

As Stasavage notes, considerations about economic development are very relevant to China's place in today's world. The millennia-old autocratic tradition of this country suggests a less optimistic future than the hopes generated by the liberalization of the economy after Mao's death. Many analysts thought that political democratization would follow, but it does not seem to be happening now (and American trade policy does not help). Contrary to what Stasavage seems to assume, the Chinese economy will not be able to continue growing without further economic and political liberalization. (See "Getting Rich Is Glorious," Winter 2012–2013.) One can argue that such a fate happened before, when the Ming dynasty (1368–1644) pursued policies undermining markets.

One question Stasavage does not ask is, whom is growth for? If the goods and services of which GDP is made are produced mainly for the political or bureaucratic class and aggregated with nonmarket prices as weights, growth is meaningless as an even imperfect indicator of general welfare. A strong autocratic (or collective-democratic) state may seem to promote prosperity, but it will be the sort of prosperity that the rulers and their supporting classes prefer. Only if the state is strictly limited can economic growth satisfy individual preferences as expressed on free and impersonal markets.

Limited democracy / In the end, history illustrates why the state must be distrusted, even when it pretends to be "us." As we have seen, political rulers will try to rule as autocrats. The state will charge in taxes what the market will bear. Only institutional constraints (sometimes helped historically by exit options offered by nature) will stop it.

Democracy is valuable only as an institutional constraint—that is, if it serves to build and maintain a limited state allowing a wide margin of individual liberty. Early democracy was tyrannical against unpopular individuals and ideas, but modern democracy leaves individuals powerless before the overwhelming power of a state claiming to represent all and everybody. "Democracy," wrote de Jouvenel, "in the centralizing, pattern-making, absolutist shape that we have given to it is, it is clear, the time of tyranny's incubation." "Modern democracy," Stasavage admits, "has a somewhat autocratic feel compared to early democracy."

The Anti-Federalists, notes Stasavage, "argued that giving the federal government the power to levy taxes risks resulting in tyranny." He adds: "This is not what happened in the end." But history has not ended and the federal government's power is not decreasing. Contra Stasavage, a strong central state may be no less dangerous at the end of democracy than at the beginning. It is a sobering thought that the American republic is now roughly the age at which the Athenian democracy died.

If it is to survive its totalitarian temptations or the takeover ambitions of autocrats, the democratic state needs a weight-loss diet and humility. That is not Stasavage's own conclusion. *The Decline and Rise of Democracy* is a good and instructive book, but it needs to be completed with an interrogation on why democracy is useful and how it can be relieved from its unrealistic promises. R

Blindsided by the Financial Crisis

REVIEW BY PHIL R. MURRAY

Sharyn O'Halloran is a professor of political economics and an administrator at Columbia University, where Thomas Groll is a lecturer. The two are editors of this collection of papers by academics, banking industry executives, and government officials on financial regulation in the wake of the 2008 financial crisis. "We hope," the editors say, "the chapters shed light on how to think about the risky business that was the financial crisis, how ad hoc policy responses came about often in the depths of uncertainty and surrounded by controversy about effectiveness and fairness, and how we can do better in the future to manage risk and prevent crises that affect so many."

Toxic securities / In the first chapter, O'Halloran, Groll, and Geraldine McCallister describe the events leading up to the Great Recession. Let me quote at length their view of the causes:

> Exorbitant risk-taking by financial institutions inadequately overseen by regulators triggered the financial crisis. The housing market's boom and bust underscores these lessons: permissive regulations allowed banks to offer mortgages with small down payments to buyers who had insufficient income to afford them. Compensation practices at financial firms rewarded volume and short-term performance over long-term sustainable returns. And credit rating agencies, laden with conflicts of interest, gave investment-grade ratings to subprime mortgages made [sic] them willing to designate tranches of subprime mortgages as investments-grade assets in exchange for a fee. As the housing bubble burst and prices declined, the underlying value of the mortgages that secured these assets fell into default. The subsequent mortgage crisis led to a liquidity crunch brought on by inadequate price discovery of asset valuations and uncertainty about credit risk. These highly leveraged mortgage-backed securities, assigned triple-A ratings by credit agencies and with scant regulatory oversight, were exactly the funds that drove Bear Stearns into insolvency.

They blame both the market and government. Former House Financial Services Committee chair Barney Frank discusses "permissive regulations" in a later chapter. He argues that the market is mostly to blame because securitization and financial derivatives were inadequately regulated. He attempted to change the regulations before house prices crashed, but political opposition stopped him. According to Frank, "the reason for the flood of mortgages destined for foreclosure, the single biggest cause of the crash, was the self-interest of lenders in maximizing their profits." If someone asked Frank why self-interest in *other* industries does not cause the economy to crash, I suppose he would say that lenders maximizing their profits *plus* financial innovation and inadequate regulations made the financial sector different.

Loans with low or no down payments were a problem. O'Halloran, Groll, and McCallister do not explain why banks abandoned the traditional practice of a 20% down payment. Russell Roberts, in his 2019 book *Gambling with Other People's Money*, offers this: "With the encouragement of politicians from both parties, Fannie and Freddie relaxed their underwriting standards, the requirements they placed on originators before they would buy a loan." That explanation is appealing. Banks would not make loans to borrowers who were poor credit risks without being able to sell the loans. If politicians permitted Fannie and Freddie to buy the loans, banks could be confident of selling them.

Frank minimizes the role of Fannie and Freddie in causing the crisis: they "did succumb to the fever and began outsourcing loans that should never have been made," he admits, "but not until years after private entities had created the securitization pipeline." He adds that "those of us on the proregulatory side" "took the lead in restructuring Fannie Mae and Freddie Mac to diminish the possibility of their becoming a drain on the federal budget, and we worked to preserve their role in providing backup housing finance for credit-worthy borrowers." Taxpayers can appreciate the effort to protect them from the mistakes of Fannie and Freddie, but that effort was unsuccessful. The Federal Housing Finance Agency put the two government-sponsored enterprises under conservatorship in 2008 and they remain there today.

IN REVIEW

O'Halloran, Groll, and McCallister cite the role of compensation. In a later chapter, John Coffee elaborates:

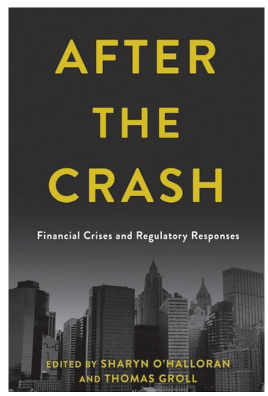
> Suppose a bank realizes that securitizations have become toxic and the mortgages it has assembled into portfolios are likely to default. Should it halt their sale? If senior bank officials handling these deals stand to make bonuses of $10 to $20 million when these deals close this year, those officers will push back hard at any such suggestion.

Investment bankers had more incentive to sell toxic securities than incentive to refrain. Incentives indirectly explain why there were buyers.

O'Halloran, Groll, and McCallister mention the "conflicts of interest" that weakened the judgment of bond rating agencies. They refer to the practice, encouraged by the Securities and Exchange Commission, in which sellers of bonds pay the rating agencies to rate the bonds. Rating agencies had more incentive to assign inaccurate high ratings to please the investment banks paying them than they had to assign accurate low ratings in the interest of the bond buyers.

To complete their summary of the cause of the financial crisis, O'Halloran, Groll, and McAllister describe the domino effect of falling house prices, defaults on mortgages, falling prices of mortgage-backed securities (MBS), and a liquidity crisis. Money market funds played a significant role in the liquidity crisis. One fund, the Reserve Primary Fund, had Lehman Brothers bonds on its balance sheet. Reserve Primary's net asset value dipped below $1 per share, which prompted runs on it and other money market funds. Contributors Viktoria Baklanova and Joseph Tanega spell out the macroeconomic effect: "The run on these funds contributed to strains in the U.S. dollar short-term funding markets and led to a systemwide liquidity freeze." The liquidity crisis became a credit crunch. O'Halloran, Groll, and McAllister report that "lending to large U.S. corporate borrowers" decreased by about 50% from the third quarter of 2008 to the fourth quarter. That substantial decrease in financing explains the simultaneous plunge in the private investment component of gross domestic product.

Regulatory reform / Contributors to *After the Crash* chronicle the history of government interventions in reaction to the financial crisis of 2008. Among the more familiar interventions were the acquisition of Bear Stearns by JPMorgan that was arranged by the Federal Reserve and Treasury, trillions of dollars of lending and open market purchases by the Fed, and bailouts of AIG, Citigroup, and the automakers. Among the less familiar is the Fed's backstopping of money market mutual funds through loans. Coffee states: "The largest bailout commitment in 2008 was the government's guarantee of money market funds."



After the Crash: Financial Crises and Regulatory Responses

Edited by Sharyn O'Halloran and Thomas Groll

415 pp.; Columbia University Press, 2019

The authors devote more thinking to regulatory reform. This begins with setting goals. Take the chief goal to be financial stability. In his chapter, Glenn Hubbard puts it this way: "Regulation should reduce systemic risk," which he defines as "the risk of collapse of an entire system or entire market." He focuses on bank capital regulations and procedures for dealing with financial intermediaries near bankruptcy. He criticizes calls for simply requiring banks to increase their capital-to-asset ratios, arguing that selling more shares imposes costs on banks in terms of what they must give up to attract investors, as well as a "social cost" in terms of fewer bank loans.

Those are valid points, though I doubt that proponents of increasing capital requirements believe it is the "free lunch" he suggests they claim. As for reduced lending, if the result is fewer bad loans, that would be a good outcome. Hubbard endorses the efficacy of "contingent capital" such as bonds that become equity if bank capital decreases. Converting bonds into equity when asset values fall may prevent bank failure. Also, he approves of dealing with any type of financial intermediary near insolvency the way the Federal Deposit Insurance Act does: "It creates a flexible insolvency regime that provides for preresolution action, receivership and conservatorship, … liquidation, open bank assistance, purchase and assumption transactions, and the establishment of bridge banks."

In his chapter, former treasury secretary Jack Lew defends the Dodd–Frank Act's resolution process in the Orderly Liquidation Authority (OLA). The OLA does not, he maintains, perpetuate a policy of too big to fail.

Although it sounds sensible to insist that the benefits of a financial regulation exceed the costs, Jeffrey Gordon criticizes benefit–cost analysis. In his chapter, he tells of how a change in the Bankruptcy Abuse Protection and Consumer Protection Act of 2005 created a systemic risk. The change enabled MBS to be used as collateral in repo transactions. Gordon describes the Congressional Budget Office's benefit–cost analysis as follows: "The benefits of greater systemic stability were assumed; the quantified assessment of costs focused on record keeping." The change increased the demand for MBS, which fueled the house price bubble. When the bubble burst, a shortage of collateral in the repo market exacerbated the credit crunch. Instead of static benefit–cost analysis, Gordon recommends dynamic precaution "to observe the system as it evolves, and to observe the effects of new rules on the system as a whole." That, according to him, is what the Financial Stability Oversight Council (FSOC) does.

Paul Tucker, chair of the Systemic Risk Council, explains "rules versus standards" in the regulation of banks. His example of a rule is that a bank's capital-to-asset ratio should be a given percentage. His example of a standard is that bank managers should "manage their affairs prudently and maintain capital adequate to remain safe and sound." Rules foster "predictability and generality." For example, if the rule is to have a minimum capital-to-asset ratio of 10%, bankers know they can sell $1 billion of shares, borrow $9 billion, and buy $10 billion of assets. They know the competition can do that too.

The problem with standards is imprecision. How much capital is enough "to remain safe and sound"? Rules are clear, but they cause "regulatory arbitrage." The simple rule of a minimum 10% capital ratio leaves a bank free to invest in the riskiest assets. Shadow banking is regulatory arbitrage as well. The advantage of a standard relates to the way in which a bank can comply with a rule yet promote systemic risk. Tucker puts it this way: "standards (or a rule for an objective) are preferred by those who regard the state of economic knowledge as insufficient for society to harness itself to a detailed rule book … and who place weight on the avoidance strategies likely to be adopted by regulated industries." If one thinks of rules and standards more as complements than substitutes, effective bank regulation means enforcing rules using judgment guided by standards of financial stability.

Several contributors attest that more bank capital, resolution planning, and stress testing enhance the "resilience" of the financial system. Readers will not encounter details of measuring bank capital, specific resolution plans, or how the Fed conducts stress tests. However, readers will encounter some detailed analyses. O'Halloran and Nikolai Nowaczyk use data science to build a "systemic risk engine" that simulates the effects of regulatory changes. Baklanova and Tanega summarize the post-crisis regulations on money market funds such as liquidity requirements, disclosure of portfolio holdings, liquidity fees, and redemption gates. Mark Roe and Michael Tröge estimate that eliminating the deductibility of interest expense from corporate income would induce banks to increase their capital-to-asset ratios by 6 percentage points. Agostino Capponi explains how derivative clearinghouses work; understanding the intricacies he describes is challenging intellectual labor.

The blind side / To paraphrase Frank, the core of the Dodd–Frank Act pertains to over-the-counter swaps, subprime mortgages, bank capital, resolution of insolvent institutions, and the Consumer Financial Protection Bureau. Despite amendments to the act that increased the asset size of institutions falling under the authority of FSOC and relief for small banks, Frank insists that the core regulations are "essentially unscathed." That, he says, is evidence of success.

Coffee's observation that "crises always come from the blind side" proves to be prescient as COVID-19 stifles the economy. The shock of the pandemic will be the ultimate stress test on the financial system and the regulations that aim to ensure its resilience. *R*

Algorithms: The Life Blood of the FANGs

REVIEW BY VERN MCKINLEY

Algorithms are omnipresent but not always noticeable because they work in the background of our everyday activity. When we follow directions to get our family to that new restaurant, when we apply for a credit card, or when our soon-to-be high school graduate submits a college application, we are interacting with algorithms. These three basic activities have been an integral part of life for generations.

The significant difference is that they are now automated, often with the aid of artificial intelligence such as machine learning. To isolate just one of these three examples, consider how the credit approval process has evolved over the past 100 years. In the early part of the 20th century, a loan was in large measure based on character as judged by a face-to-face meeting with a loan officer, supported by a few pages of paperwork on finances dropped into a loan file. When the credit card industry was in its infancy during the mid-20th century, a retail sales clerk used a rotary phone to call an authorization clerk who would look through stacks of computer-generated paper reports to determine if someone was approved for a credit card or an individual purchase.

That clunky process has been modernized, as explained by Michael Kearns and Erin Roth in their book *The Ethical Algorithm.* They write:

> When you apply for a credit card, your application may never be examined by a human being. Instead an algorithm pulling in data about you (and perhaps also about people "like you") from many different sources might automatically approve or deny your request.

Kearns and Roth are faculty members in the computer science department at the University of Pennsylvania. They specialize in and have published widely on algorithms, machine learning, and algorithmic game theory. Both have also co-authored academic books in this field: Kearns with *An Introduction to Computational Learning Theory* and Roth with *The Algorithmic Foundations of Differential Privacy.* In *The Ethical Algorithm* the authors try to address the less technical reader. To that end, they start with a simplified definition of an algorithm: "a very precisely specified series of instructions for performing a concrete task."

The placement of "ethical" in the book's title makes sense because one of the themes that arises throughout the book is the consideration of the privacy, fairness, and other ethical issues that occur in the development and application of algorithms. The authors also apply game theory to how users interact with algorithms and assess the reliability of data used in typical assessments of algorithms.

Widely applied algorithms / Everyone who follows the financial markets on a regular basis has heard of the "FANG" stocks: Facebook, Amazon, Netflix, and Google. Each of the members of this American technology club has its own famous underlying algorithm that contributed to such phenomenal success. Facebook has its news feed and advertising algorithms, Amazon has its "customers who bought this item also bought" algorithm, Netflix has a similar algorithm to recommend movies, and Google's Search and Maps applications are driven by algorithms.

The Ethical Algorithm: The Science of Socially Aware Algorithm Design

By Michael Kearns and Erin Roth

228 pp.; Oxford University Press, 2019

Most of these algorithms fall into the category of "collaborative filtering." According to Kearns and Roth, the description of these algorithms as "collaborative" is because an individual user's data are blended with the available data of others to create recommendations. The authors take this approach frequently throughout *The Ethical Algorithm* as they twin a recognizable or easily explained algorithm with an explanatory, technical term used by computer science experts.

Privacy concerns / Kearns and Roth break down case studies of the increasing lack of anonymity for our personal data because of the expansion of these algorithms. This includes what they call "reidentification," the risk of exposing a data contributor's identity or other personal details. A troublesome example of this phenomenon is the release of fitness data compiled based on contributions of users of Fitbit, an application that allows a user to track progress and set fitness goals. The technology for Fitbit relies on GPS coordinates, which has a benign purpose: to allow precise distance measurements and to enable those who want to keep fit while traveling to determine where popular running routes are in an unfamiliar city. But it also reveals the location of American military bases in countries like Afghanistan because U.S. military personnel are some of the biggest users of Fitbits. Given the dearth of Fitbit users in such countries, it is easy to locate U.S. military bases.

The authors also delve into very sensitive data issues such as health records:

> In the mid-1990s, a government agency in Massachusetts called the Group Insurance Commission (GIC) decided to help academic researchers by releasing data summarizing hospital visits for every state employee. To keep the records anonymous, the GIC removed explicit patient identifiers.

The governor at the time, William Weld, assured voters that patient privacy was protected. "Latanya Sweeney, who was a PhD student at MIT at the time … set out to find William Weld's medical records from the anonymous data release," Kearns and Roth explain. Sweeney was able to narrow the data set to six records based on Weld's birthday, and then narrowed it down to one because, of the six, "only one lived in the Governor's zip code." In her final act of this research, "She sent them to [Weld's] office."

Kearns and Roth explain the concept of "k-anonymity" as one potential way to address these privacy concerns:

> An initial idea for a solution … is to redact information from individual records so that no set of characteristics matches just a single data record. Individual characteristics are divided into "sensitive" and "insensitive" attributes.… The goal of k-anonymity is to make it hard to link insensitive attributes to sensitive attributes.

Applying an accepted definition of fairness / The concept of privacy is something most people understand and appreciate, but the notion of fairness has a broad range of interpretations. Kearns and Roth explain that, in the case of some of the FANG algorithms, "controlled online experiments have demonstrated racial, gender, political and other types of bias in Google search results, Facebook advertising, and other Internet services." Kearns and Roth commit some time to defining fairness in terms of statistical parity in a world of two races of people, Circles and Squares. They write:

> Suppose for some reason we are concerned about discrimination against Squares in the granting of loans by a lender.… Statistical parity simply asks that the fraction of Square applicants that are granted loans be approximately the same as the fraction of Circle applicants that are granted loans, a crude constraint saying that the rate of granted loans has to be roughly the same for both races.

After walking through the mechanics of how this would work in practice, Kearns and Roth summarize the two likely results of developing an ethical algorithm: "one by denying loans to creditworthy Circle applicants and the other by granting loans to Square applicants we know (or at least predict) will default." They conclude that "in an era of data and machine learning, society will have to accept, and make decisions about, trade-offs between how fair models are and how accurate they are." Similar choices are presented in the case of having a "fair" university application process.

Conclusion / The authors open the book by making the argument that, rather than addressing these algorithm tradeoffs through post hoc regulations, "the idea is to fix them from the inside." One example of this approach is the k-anonymity concept, which was a solution to reduce the likelihood of reidentification. The authors also talked early on about developing "quantitative definitions of social values that many of us can agree on."

I was expecting a final chapter (or two) that would bring home the strains of thought on these topics, but the final chapter was a bit of a disappointment. It is quite brief (half a dozen pages) and the final discussion of design of ethical algorithms ended abruptly, relying on a "case-by-case" approach to developing solutions, although many of the solutions posited throughout the book were helpful in giving a sense of possible approaches. The authors emphasize that avoidance of algorithms is simply not an option, as their omnipresent and growing nature means that it is not at all possible to "avoid algorithms altogether … [as] all decision-making—including that carried out by human beings—is ultimately algorithmic."

I admit that I was a bit out of my comfort zone in reading this book. The case studies on the FANG companies were understandable and relatable, as I had not given much thought to how these algorithms come together. But the discussions of the technical issues were a tough climb at times. I consider myself comfortable with high-level discussions about statistical and technology issues, but some of the terminology on computer science was a bit too much in the weeds for my taste. They became difficult to follow once Kearns and Roth strayed from the case studies and tried to link them to statistical or technology concepts.

Serves me right for accepting a book recommendation from someone who has a doctorate in economics. R

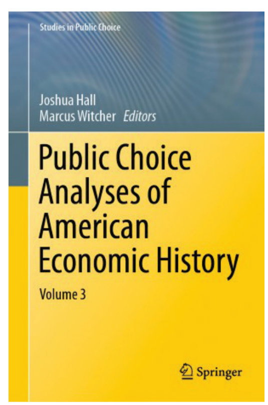
A Potentially Fruitful Collection

REVIEW BY ART CARDEN

West Virginia University's Joshua Hall is the very definition of an academic entrepreneur: someone who notices a misalignment in production and realigns it. This collection, edited by Hall and historian Marcus Witcher of Huntingdon College, is an example of such entrepreneurship and a timely contribution in light of the ways in which economics—and public choice economics in particular—have come under fire from the "new history of capitalism."

I talked with Hall about this project at the 2019 Southern Economic Association meeting. He described his and Witcher's strategy for the collection: they looked for interesting papers that have circulated or sat in filing cabinets for quite some time—decades, in some cases—unpublished. This is how they got contributions from a mix of young, more established, and very prominent scholars. There are a lot of names that will be very familiar to readers of the public choice literature and there are contributions from several prominent economic historians.

Suffice it to say that I am sympathetic to this project (and, I should acknowledge, professionally and personally acquainted with some of the contributors). Hence, I worried that I would have too-great expectations for the project. Nonetheless, it largely does not disappoint. Some of the contributions are straightforward cliometric—quantitative/historical—analysis applied to political issues. Others read like proposals or proofs of concept. Some of the analyses, like the papers by Phil Magness on southern secession and Jayme Lemke and Julia Norgaard on the role of "club women" in the provision of public goods, are counterexamples—critics might say the exceptions that prove the rule—to the criticism that public choice ignores issues of race, class, and gender.



***Public Choice Analyses of American Economic History*, vols. 1–3**

Edited by Joshua Hall and Marcus Witcher

199, 178, and 206 pp.; Springer, 2018–2019

What scholars should write / The set begins promisingly with a contribution from King's College economist Vincent Geloso that marries one of the traditional concerns of public choice theory—public debt and budgeting—with the oppression of a minority and an explanation of the American Revolution. Geloso studies the expulsion of the French-speaking Acadians from Atlantic Canada beginning in 1755 and points out some familiar tropes that will be familiar to observers of oppression. (For instance, the Acadians were "lazy" according to stereotypes). He explains how their expulsion was basically a land grab by British settlers cloaked in bias against French-speaking Catholics and the language of security. It was, he argues, part of a fiscal debacle that contributed to the American Revolution.

The volumes in *Public Choice Analyses of American Economic History* contain several contributions on the American founding specifically and the less-than-perfect compromises that made the U.S. Constitution possible. A chapter by University of Akron economist Robert McGuire evaluates a handful of these compromises in a manner that changed my belief that the Electoral College was created specifically to protect slavery and the slave interest.

This is followed by an argument from University of Central Arkansas economist David Mitchell that "the economic theory of regulation provides a better analytical framework for understanding the changes in U.S. tax policy" than that developed by Robert Higgs in his 1987 book *Crisis and Leviathan.* A public choice perspective on the history of regulation and subsidy is especially useful.

UCLA economic historian Dora Costa explains how public health insurance would not have benefited workers much beyond what they already had. That idea is consistent with historian David T. Beito's *From Mutual Aid to the Welfare State* and economist John Murray's *Origins of American Health Insurance.* What mattered, Costa argues, was replacing lost earnings rather than securing health care, which likely did not have much value at the time. It raises an interesting question for modern public policy: would we get more bang for the next buck we spend if we spend it on something like sanitation as opposed to health care?

In addition to these, the collection offers studies of such topics as the determinants of federal grants to states, the compromises that led to the U.S. Constitution (including interesting analyses of the 1783 nationalist movement and the Federalist and Anti-Federalist information networks), analysis of the political economy of veterans' benefits, labor regulation, banking regulation, mining regulation, the Apollo program, home rule, education, political partisanship, immigration restrictions, women's suffrage, the provision of local public goods by "club women," and rent-seeking in antebellum banking.

The two most important contributions, I think, are those by economic historians Magness and Howard Bodenhorn. Magness offers a novel explanation of southern secession in terms of protecting government aid to the slave regime. With the election of Abraham Lincoln, it appeared to the slave-owning elite that the federal gravy train was slowing and they would need to establish a different one in a new national capital in Montgomery, AL or, later, Richmond, VA.

As Bodenhorn notes in his contribution (which appears as the final chapter in the collection), "While the private seeking of private monopoly is now economically insignificant, nineteenth-century America was built on it." If he is right—and I think he is—then we need public choice analysis if we are to understand American economic history. His paper is a model of the kind of works scholars should write: a theoretically, quantitatively, and historically rigorous estimate of the drag on the economy from the rent-seeking society. Readers of *Regulation* know that institutions matter and we are better off if the rules encourage production rather than predation. Bodenhorn offers a useful step toward helping scholars figure out just how much better off we might be without institutions encouraging as much institutionalized theft.

The timing for this collection is right, given the recent emphasis on the supposed link between slavery and American economic growth.

Some criticisms / Hall and Witcher do what good editors do with collections like these: reduce search costs and bring good papers into a single place. The collection suffers, however, from a lack of clarity of purpose. The papers are public choice analyses and they are about American economic history. They are, however, assembled without apparent rhyme, reason, or unifying themes. The papers bounce from topic to topic seemingly randomly. Given that it is a three-volume collection, they would have done well, I think, to assemble the papers topically or chronologically. The collection would have benefited from having all the papers on banking, for example, put together, with at least some idea as to how they complement one another.

Moreover, the collection would have been much improved by an editors' introduction explaining what they were doing. It would be useful to know at the outset that some of the papers are vintage unpublished papers by leading scholars, and it would be especially useful to know what warrants their publication now. Having taught both economic history and public choice, it is pretty obvious to me why the public choice paradigm is a useful—even essential—way for thinking about the past, but it might not be so obvious to a lot of readers. In particular, a lot of historical analysis explains historical change in terms of people's interests. What, we might wonder, are the important differences between a public choice analysis or a more traditional historical analysis following, for example, in the Marxist tradition? The not-yet-converted, I suspect, will read the papers in this collection and continue in their unbelief.

That said, the papers collected in these volumes suggest potentially fruitful directions for further research (some of which I am working on myself). In all, Hall and Witcher have assembled a series of essays by younger and more established scholars that fill a gap in our understanding of American economic and political history. The timing is right, too, in light of recent emphasis on the supposed link between slavery and American economic growth and claims made about the (alleged) racially problematic roots of public choice theory in Nancy MacLean's *Democracy in Chains* and the growing body of work drawing on her claims. (See "Buchanan the Evil Genius," Fall 2017.)

Unfortunately, these books are priced for university libraries: the three volumes together run about $270. For the scholar interested in public choice, American economic history, or both, the volumes would be worth an email to Interlibrary Loan—or a visit by the Springer table at the next conference to see how deep a discount they are offering. *R*

A Story of Love and Hate

BY PIERRE LEMIEUX

I am certainly not the only one to have a love–hate relationship with *The Economist*, the venerable magazine created in 1843 to defend free trade. At least over the past 10 years, the magazine seems to have become more tolerant of Leviathan, but it remains a source of serious information and it keeps me up to date on what intelligent social democrats think.

I had the same feeling reading Philip Coggan's new book *More*, which, as the subtitle indicates (*The World Economy from the Iron Age to the Information Age*), attempts to cover the whole economic history of mankind. The fact that Coggan is a journalist at *The Economist* may have something to do with this. On the one hand, he presents an exhilarating story of trade and human ingenuity over the millennia. On the other, he seems to view the expansive state as being as innocuous as John Maynard Keynes did.

Ingenuity and institutions / History offers a plethora of examples of human ingenuity. Genetic engineering through seed selection is thousands of years old. In the 14th century, the cost of a given amount of artificial light is estimated to have been 12,000 times higher than today. Despite the environmental scares of the 1970s, famines have become exceedingly rare, even if there is a risk that COVID-19 and the policies adopted by governments (lockdowns and export restrictions) take some countries backward.

Social institutions can encourage or discourage human ingenuity. The more economic freedom and private property rights, the more inventions and innovations. In ways reminiscent of Leonard Read's 1958 essay "I, Pencil," Coggan gives examples of the complexity and productivity of an economy based on free institutions. British designer Thomas Thwaites attempted to build a humble toaster from scratch but only demonstrated that no single person can produce the 400 parts and 100 materials typical of today's toasters. After nine months of work, his rudimentary toaster melted down within five seconds.

But sometimes Coggan downplays the role of good institutions. Developing countries, he claims, have recently shown "that prosperity could be achieved with more than one model, including the Chinese approach of a heavy state presence." In their 2012 book *How China Became Capitalist*—which Coggan does not mention—Ronald Coase and Ning Wang argue that China's success is explained by the advance of free markets, not the persistence of authoritarian institutions. (See "Getting Rich Is Glorious," Winter 2012–2013.)

Trade / One social institution that is closely related to economic freedom and property rights is trade, which constitutes a major thread in *More*. "This book," Coggan writes, "is in part a story of how trade became broader and deeper over thousands of years, to the extent that cross-border trade encompasses more than half of everything the world produces every year." Trade is both a consequence of, and fuel for, human ingenuity.

As far back as 7,000 BCE, the ancient world knew some long-distance trade. In the first millennium BCE, the Phoenicians and the Greeks established a trading network across the Mediterranean. The security provided by the Roman Empire further extended trade. Reactionaries already existed: "Pliny the Elder complained of the fortunes that were lost from the empire annually to purchase Asian products, 'so dearly do we pay for our luxury and our women.'" Today, it is the workers in general who import from Asia furniture, clothes, and electronic devices (often just assembled there in the middle of long production chains).

In modern times, the first era of globalization runs from the end of the 19th century to World War I. It only took a few decades from the start of the Industrial Revolution around 1820 for salaries to increase and inequality to decrease. In America, tariffs were jacked up after the Civil War, but transport costs fell faster than tariffs rose.

The period from the beginning of the Industrial Revolution to 1914 was also a century of immigration. As Coggan points out, immigration does not generally reduce wages because more laborers mean more demand and thus higher wages in some parts of the economy. "If more workers mean lower wages," he asks, "then how come the rise in the global population from 1 billion to 7 billion hasn't led to mass poverty?" Good question!

The second area of globalization in modern times, from about 1979 to 2007, coincided with the Great Moderation (continuous growth without inflation) in developed countries and a dramatic reduction of poverty elsewhere. Developing countries grew rapidly, even relative to the developed world. Inequality decreased among countries, though in some cases it increased within them. The retreat of poverty is the big story of the time: between 1981 and 2015, the proportion of people living in extreme poverty in the world dropped from 40% to 10%. Over the same period, China's real gross domestic product per capita increased 30-fold. Latin America, however, has had a checkered growth history because of nationalism, protectionism, government deficits, money creation, and often hyperinflation.

Janus's other face / Coggan, like *The Economist*, believes that the state is very useful. He repeats a version of the Hobbesian argument for the state: Without it, prosperity is impossible. Before the modern state, "if your house was robbed or attacked, there was no police service to protect you." What he does not mention is that we can imagine another scenario: the police come after someone attempted to rob your house and you defended yourself, and they arrest you. (This is common in the United Kingdom, where, for ordinary citizens, handguns are banned and self-defense is virtually prohibited.)

What if your house is attacked and robbed by government agents? Or perhaps the government wants to expropriate it to build something else? Siding with historian Ian Morris on the idea that government-guaranteed order is necessary for trade, Coggan criticizes Ronald Reagan's pronouncement that the nine scariest words are, "I'm from the government, and I'm here to help." For Morris, the scariest words are, "There is no government, and I'm here to kill you." But both Morris and Coggan seem to forget that there is an even scarier set of words that is rather common in history: "I'm from the government and I'm here to kill you." Keeping strict limits on the state is crucially important. Coggan, like *The Economist*, sometimes forgets that.

Coggan has an affection for the Roman Empire because it facilitated trade over its territory. Economies, he writes, "struggle when central authority is breaking down," like after the empire fell in the 5th century CE. This does not give due credit to the insight of Walter Scheidel, that the political anarchy created in Europe by the fall of the empire led to the Enlightenment and Industrial Revolution, in contrast to stagnation in imperial China. The powerful Chinese state constantly impeded trade. In that context, French sociologist and historian Jean Baechler emphasized that "the expansion of capitalism owes its origins and its raison d'être to political anarchy." (See "Let's Travel That Road Again," Spring 2020.)

Coggan acknowledges some monumental government failures. "It is hard," he notes, "to think of a bleaker period of modern history than the three decades from 1914 to 1945." World War I, in which governments sleepwalked into the conflagration for no good reason, wrought death and destruction besides increasing state size and power. After the war, the German experience demonstrated (again) the danger of money creation by the state. Workers needed wheelbarrows to carry their money. "On a single day in November 1923, the price of a loaf of bread rose from 20 billion marks to 140 billion." The Soviet Union showed the catastrophe of central planning, including in terms of famines. The Chinese government followed suit a few decades later. Is the state really so trustworthy?

Consider the 2008–2009 economic crisis. Coggan suggests that it was caused by too little financial regulation, instead of too much interventionism. But he correctly notes that residential mortgage-backed securities were pioneered in 1970 by a government-sponsored enterprise, Ginnie Mae (the Government National Mortgage Association), and that there was "a deliberate attempt by the US authorities to expand home ownership in the 1990s and 2000s."

He misunderstands the origins of money. It was not an invention of government authorities, but rather of private actors. Government intervened afterward to certify the value of gold or silver coins, and soon to debase their value. Contrary to what he assumes, central banks are not an existential necessity—except for state rulers. He ignores the experience of free banking and private currencies in Scotland as well as in Canada, where a central bank was only created in 1934.

The author of *More* admits the failure of the Federal Reserve, the American central bank, to stop the Great Depression: "The Great Depression was a failure that has haunted central banks ever since it happened. They failed both to preserve currency parities and to safeguard the financial system." The Fed had been created in 1913 with the (stated) goal of preventing banking crises. Coggan does not seem to realize that, in the United States, state and federal regulations prevented or forbade banks to open branches, which led to the creation of tens of thousands of small, one-branch banks that were set up for failure. The Fed was a false solution to the problem of too much government intervention.

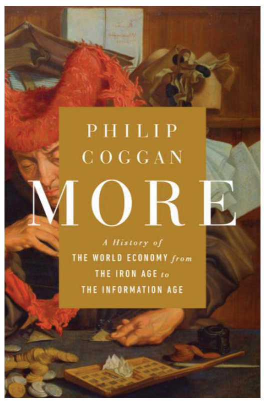
Why does he not consider the experience of Canada and its notably stable private banking system? Around 1890, Canada had only a few dozen banks, but with cross-country branches that soon reached into the thousands. Renée Haltom, an economist with the Federal Reserve Bank of Richmond, notes that from 1840 until today, the United States experienced 12 systemic banking panics, an average of one every 15 years, while Canada has had exactly zero.

Coggan argues that the state plays many essential roles: protecting the rule of law; financing or supplying public infrastructure, education, and health; providing welfare assistance; maintaining macroeconomic stability; funding research and innovation; as well as regulating to prevent or correct a "tendency towards monopoly," negative externalities, and asymmetries of information. He sees the "mixed economy" as the natural result of democracy. Governments, he claims, "increase welfare, in the sense of the greater good," but he does not inquire what that means when individual preferences differ. Similarly, what is "the country's interests" as opposed to the interests of politicians, bureaucrats, and their favorites?

He believes that the state must expand, but only to a point. "Authoritarian capitalism" and autarky must be avoided. Industrial policy and protectionism are inefficient. But how to stop such a powerful state? Benito Mussolini may have been more realistic when he predicted that the 20th century would be "the century of the state." His prediction was in large part realized. And thus far, the 21st century looks even worse.

Influence of Keynes? / Why don't intelligent analysts like Coggan and others who write for *The Economist* see the risk of a powerful and expansive state? Do they not fear an Argentinian or Venezuelan future, or worse? A big part of the answer may lie in the work of Keynes and his followers.

Keynesian economic theory views the whole economy in terms of fragile aggregate demand, not as a production possibility frontier in a general equilibrium mechanism. (On the concept of a production possibility frontier, see "Cheaper Oil Cannot Hurt the Economy," Spring 2015.) For example, and contrary to what Coggan seems to think, an increase in the price of one good or service will not per se generate inflation. What will happen is that fewer other goods or services will be produced (along the production possibility frontier) and consumed, which means that their relative prices will decrease to compensate for the price increase elsewhere. When one does not clearly see this tendency toward equilibrium through the adjustment of relative prices, macroeconomic stability becomes unthinkable without the state. Coggan notes that Adam Smith "did not deal with issues like … a general deficiency of demand"; indeed, Smith was interested in exchange and limited government, which are the keys to long-term growth.



More: The World Economy from the Iron Age to the Information Age

By Philip Coggan

470 pp.; The Economist, 2020

"Aggregate demand" is a misleading concept. Coggan claims that economies boomed after World War II because of "pent-up demand waiting to be satisfied." How can we make sense of this? There always exists "pent-up demand waiting to be satisfied" because people always want more (as the title of Coggan's book suggests). The problem in World War II is that governments grabbed resources to allocate to war activities. What happened after the war is simply that those resources were released to satisfy consumer demand and private investment for future consumption.

Another aspect of Keynes' influence was his confidence that, through the state, "dangerous acts can be done safely in a community which thinks and feels rightly, which would be the way to hell if they were executed by those who think and feel wrongly," as he explained in a letter to Friedrich Hayek. Keynes obviously saw himself as very representative of the people who think and feel rightly, and believed that, at least in Western countries, they would always be at the helm of the state. Public choice theory, developed after Keynes, has shown that politicians, bureaucrats, and even majorities of voters may not think and feel rightly (at least in the view of those who have different preferences).

Pluses and minuses / "Economic history is all about connections," Coggan writes. "The more people with whom we can connect, the more likely it is that those connections will be useful. … Trade is good." These vast interconnections, capable of producing goods such as a toaster, cannot be coordinated by any individual mind. Coggan reports the story of the Russian official who asked British economist Paul Seabright, "Who is in charge of the supply of bread to the population of London?" Alternatively, as Coggan also notes, "Just because government is in charge of planning doesn't mean that the environment will be protected."

Arguments like these make much sense, but Coggan's underlying political philosophy seems flimsy and sometimes leads to inconsistent proposals. If free, decentralized trade is good, why does economic freedom in other areas have to be controlled by the heavy hand of government? How can we argue for strict limits on government intervention in trade and for expansive government power in other fields of social and economic life?

Coggan admits that his book is a journalistic book, not an academic book. It has the benefit of being easy to read and showing "the big picture." It is good journalism (although not all his sources and citations are equally good). The reader trained in economics will find small technical errors and ambiguities here and there, like in Coggan's definition of the labor force participation rate or his confusion between Ronald Coase's theory of the firm and the issue of limited liability. But let those who have never made errors cast the first stone against him.

He often provides good explanations. The old-style manufacturing that was at the heart of the Industrial Revolution was replaced in rich countries by the services that consumers now prefer (for example, streaming music instead of buying compact discs) and by more sophisticated manufacturing. The 1.5 million lines of computer code used in a high-performance car are a service, not a manufactured good. Workers in developing countries are happy to get the old manufacturing jobs, and consumers in rich countries benefit from cheaper goods.

More fails to account for all the debates and their subtleties. The author misses the growth of libertarianism in the 20th century, an intellectual current issued from classical liberalism. He puts conservatism and libertarianism in the same "right-winger" bag. Finance, he says, may not be "socially useful," a strange, Marxist notion. His attraction to the state leads to an incomplete interpretation of economic history. From this viewpoint, John Hicks's *A Theory of Economic History* (1969) is more interesting, even if not as exhaustive. (See "John Hicks and the Beauty of Logic," Winter 2014–2015.)

In the past few years, Coggan notes, we have seen an advance of nationalism and populism. Regarding Donald Trump's protectionism, he says, "More worrying is the ideology that underpinned this approach." I am not sure that "ideology" is the right word because Trump does not seem to have one. If he does, it is a general preference for collective over individual choices, which characterizes the left as much as the right. Coggan correctly suggests that ignorance is part of Trump's obsession with the trade deficit and his expressed belief that foreign exporters, not domestic consumers, pay tariffs.

In the economically literate part of the political establishment, of which both Coggan and *The Economist* are guiding lights, the Keynesian presumption for, and trust in, the state easily overcomes the concern for individual liberty. This is as serious a problem as the current populism. R

IN REVIEW

An Unpersuasive Book with Some Encouraging Insights

REVIEW BY DAVID R. HENDERSON

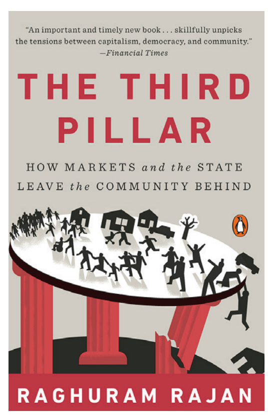
In his latest book, Raghuram Rajan, a chaired professor of finance at the University of Chicago's Booth School of Business and former governor of the Reserve Bank of India, advocates what he calls "inclusive localism." His basic idea is that there are three pillars of a good and productive society: the market, the state, and the community. He argues that the community, which is the third pillar, nicely balances the excesses of both the free market and the state.

Although there is a strong case to be made for the importance of the community, Rajan does not make it nearly as well as he could have. *The Third Pillar* contains many insights and important facts, but his argument for inclusive localism is halfhearted. He concedes far too much to the current large state apparatus and, in doing so, implicitly accepts that communities will be weak. Again and again in the book, when contemplating how to make local communities more powerful relative to federal governments, he fails to call for a massive reduction in state power. At times he accepts the state apparatus because he believes, often unjustifiably, in its goodness and effectiveness, and at times he accepts it because he seems to have a status quo bias.

Moreover, although Rajan has better than the median economist's understanding of the free market, he misses opportunities to point out how the market would straightforwardly solve some of the dilemmas he presents. He also gets some important history wrong. And he makes too weak a case for free trade and favors ending child labor even in third-world countries where children and their families desperately need them to work.

The state replaces the market / In explaining the growth of national governments' power over the economy in the late 19th century and early 20th century, Rajan focuses on Germany and Britain. In the 1880s, he notes, German chancellor Otto Von Bismarck introduced government-financed insurance for sickness, industrial accidents, and disability and old age. Between 1906 and 1911, the British Liberal government implemented old-age pensions, set minimum wages, and introduced government-financed unemployment and health insurance. Rajan grants that these German and British measures "did diminish the role of the community," but nowhere in a book touting the importance of the community does he call for repeal of any of those measures. In discussing the U.S. Social Security program, for example, he advocates sensible reforms such as increasing the age of eligibility and reducing cost-of-living adjustments for Social Security, but he makes clear that those measures are intended to deal with the exploding federal debt and to keep Social Security afloat.

In a chapter titled "Responsible Sovereignty," he struggles with a dilemma that a fairly unobtrusive regulation would solve. He points out that U.S. chicken farmers crowd chickens together, whereas chicken farms in the European Union are subject to minimum space and ventilation standards. As a result, U.S. farmers disinfect chickens with chlorine to clean them, whereas EU farmers need use only water. The European Union, he notes, bans chickens washed with chlorine even though there is no evidence that the chickens threaten consumers' health. He then poses the following dilemma: On the one hand, the restriction can be seen as protectionist; on the other, "it may reflect the genuine preferences of Europeans or the concerns of their food administrators." What to do? Rajan leaves the dilemma unsolved, even though a straightforward solution is to simply require disclosure and let consumers decide. The EU could require that chickens washed in chlorine carry a label saying so. That way those Europeans with "genuine preferences" for chickens not washed in chlorine could know to avoid U.S. chickens while other Europeans, probably disproportionately poorer ones, could buy lower-price U.S. chickens.



The Third Pillar: How Markets and the State Leave the Community Behind

By Raguran Rajan

434 pp.; Penguin Press, 2019

One of the biggest disappointments is his view on immigration. An immigrant from India himself, he makes good economic arguments for more immigration. He notes, for example, that Japan, China, and, to a lesser extent, the United States will need more young immigrants in the future as their populations age. But he is vague about how much more immigration should be allowed or even what the rules should be. Rajan takes as given that immigration is a federal government responsibility even though the U.S. Constitution gives the feds no such power and even though, for many decades after America's founding, state governments had control over immigration. But he does not advocate reducing federal government power. Interestingly, he notes a tension between an extensive welfare state and more immigration. He argues correctly that the more heterogeneous the population is (which would happen with more immigration), the less support there would be for a welfare state. He seems to see this as a negative, but for people who favor relatively open borders and no welfare state it is a strong positive.

One area on which Rajan is quite insightful is housing. He points out that zoning in New York, San Francisco, and San Jose has prevented residential areas from becoming denser, driving up housing prices and pricing out many families. This, combined with government schools that take students based on residence, means that many families fail to get a quality education for their children. In one of his final chapters, he argues for freeing up housing supply. That is not all he proposes, though; he also calls for price controls—which he euphemistically calls "affordable housing"—on 15% of the housing stock in a given community. A better solution would be to simply allow much more residential construction. Readers under age 60 may not know this, but 50 years ago many middle-class and even lower-income families could afford housing in San Francisco, Los Angeles, and New York without any price controls. Relatively loose restrictions on building did wonders for housing prices.

Unfortunately, he undercuts his own case for allowing more housing. In arguing against government restrictions on building, he writes, "When we have to choose between competition and property rights, we should invariably choose competition." But on the issue of housing, we do not need to choose between the two. Allowing landowners to build means *respecting* their property rights, and that leads to a more competitive housing sector.

Sometimes muddled thinking / Rajan takes on Milton Friedman's view that the only purpose of a corporation should be to maximize profits. Rajan argues that corporations should maximize "value" instead. What is the difference? He illustrates with an example of employee training. Imagine that workers join a firm that is known to maximize profits. Then, he writes, if the firm must choose between profits and investing in employees, it will choose the former. But employees, knowing this, will therefore require more pay than they would if the corporation provided training. Therefore, he writes, the firm that maximizes profits "saves nothing in wages over time." But because it has not invested in training, it will forgo additional net revenue and be worse off than if it *had* invested in training.

Are you confused? Rajan is. Notice that the firm that sets out to do what he thinks it should do—namely value-maximize—finds that it also maximizes profits. His posited tension between profit maximizing and value maximizing is nonexistent. And it is Rajan himself who shows that it is nonexistent. Interestingly, though, the issue does not seem to matter for his preferred economic policy. Although he sticks with value-maximizing as the desired objective, he proposes no legislation to force corporations to do so.

> *Are you confused? Rajan is. Notice that the firm that sets out to do what he thinks it should do—value-maximize—finds that it also maximizes profits.*

Rajan worries, as do many economists, that occupational licensing unnecessarily impedes many people from climbing the economic ladder. He cites work by Morris Kleiner and the late Alan Krueger showing that the percentage of the labor force subject to government licensing has climbed from under 5% in the 1950s to almost 30% in 2008. He quotes the Kleiner/Krueger finding that the monopoly power due to occupational licensing causes wages in the licensed occupations to be about 18% higher than otherwise. He leaves unsaid, but clearly understands, that the only way licensing can do this is to restrict supply. That means that many people who fail to get into those occupations are worse off than if licensing did not exist. Disappointingly, he does not advocate ending licensing but settles for advocating national licensing and also advocating that local licensing be no more restrictive than his proposed national licensing. But how restrictive should national licensing be? Rajan does not say.

One area, though, in which he does advocate reducing monopoly power is in intellectual property. The extreme form that protection of intellectual property has taken over the last few decades concerns many economists. Rajan argues, correctly in my view, that although the original purpose of patents was to encourage innovation, the ease with which they are granted makes patents on relatively trivial innovations a barrier to innovation. Patents now last 20 years, up from the 17-year length that we had for many decades. He proposes a fairly straightforward reform: allow a patent to expire after the current 20 years or, say, eight years after a product using the patent is sold in the market, whichever occurs first. Why eight years? Because many years pass between when drug companies get a patent on a new drug and when the Food and Drug Administration finally approves the drug's sale. The eight years would assure that the drug companies get a monopoly for eight years. This would preserve their incentive to spend heavily on research and development. If there is any area where patent protection is particularly important for innovation, it is pharmaceuticals, and the main reason for this is that the FDA takes so long to approve.

Rajan worries that competition in the U.S. economy has fallen and advocates stepped-up enforcement of antitrust laws. He seems to have two main reasons for the decline in competition. The first is based on economic history. He criticizes the "control" that John D. Rockefeller's Standard Oil had over refined oil. But Standard Oil's market power came mainly from producing a quality product, taking advantage of extensive economies of scale, and vertically integrating. Rajan's senior University of Chicago colleague, Lester Telser, in his 1987 book *A Theory of Efficient Cooperation and Competition*, put it well: "The oil trust did not charge high prices because it had 90 percent of the market. It got 90 percent of the refined oil market by charging low prices." And were those prices ever low! As economist Thomas J. Dilorenzo has shown, the price of refined petroleum fell from over 30¢ a gallon in 1869 to 10¢ in 1874 and 5.9¢ in 1897. That is why Rockefeller's major critics were heads of other oil companies and muckraker Ida Tarbell, the daughter of an oilman whom Rockefeller competed out of business.

Rajan's second reason for favoring increased antitrust enforcement is the increasing concentration of U.S. industries. But he notes that the costs of complying with government regulation hurt small businesses more than big businesses because small businesses have less output over which to spread the cost. In my doctoral dissertation, I called this "economies of scale in compliance." Regulation, therefore, creates concentration. Deregulation, not more antitrust enforcement, is a better way to get more competition.

In making his case that we can go too far in the direction of markets, Rajan writes, "Reverend Thomas Robert Malthus epitomized the heartless side of [classical] liberalism, when taken to its extreme." Commenting on Malthus's claim that disease, war, and famine would be natural checks on population growth, he writes, "No wonder historian Thomas Carlyle termed economics the 'dismal science.'" But that is *not* why Carlyle coined the term. Instead, in noting that the dominant economists of his day strongly opposed slavery, Carlysle said economics was dismal because they opposed slavery. That is a big difference.

One thing that is well established in economics is that child labor in very poor countries is a boon to children and their families. I made that point in *Fortune* in 1996 and Nobel economics prizewinner Paul Krugman made it in *Slate* in 1997. We both pointed out that children who work in "sweat shops" are virtually always better off than in their next best alternative. That next best alternative, if they are lucky, is a lower-paid job in agriculture or, if they are unlucky, picking through garbage or starving. Yet Rajan, who comes from a poor country, writes, "All countries should, of course, respect universal human rights, including refraining from using slave labor or child labor." He is right on slave labor; he is horribly wrong on child labor. If he got his way, millions of poor children would suffer needlessly.

Rajan, like the vast majority of economists, favors free trade. He writes, "The jobs protected by steel tariffs typically are outweighed by the jobs lost everywhere else." That is true and it is a good point. But he does not mention the main case economists make for free trade: the gains that protection gives to domestic producers are well below the losses that it inflicts on consumers.

In arguing for strengthening communities, he perplexingly advocates an increase in state power. He writes, "The state can also create bridging vehicles such as national social or military service." He does not specify whether he means compulsory or voluntary national service. The form it takes matters a lot. Either way, it undercuts his favored third pillar.

One bright spot is Rajan's refreshing way of expressing insights. For example, he sees a lot of problems with China's unusual mixed economy and coins a beautiful phrase to describe it: "competitive cronyism." And here is how he characterizes populism: "Populism, at its core, is a cry for help, sheathed in a demand for respect, and enveloped in the anger of those who feel they have been ignored."

In short, *The Third Pillar* is a mixed bag. It has many insights and Rajan knows how to turn a phrase. Unfortunately, he does not make a strong case for community and too readily accepts a high amount of state power over people's economic lives, even in "the land of the free." *R*

Getting the Educational Job Done

REVIEW BY ART CARDEN

Thomas Sowell is a scholar and thinker who defies description and easy categorization. The best I can do is "intellectual juggernaut." On his 90th birthday, he published *Charter Schools and Their Enemies*, a data-driven evisceration of entrenched interests thwarting poor students' access to charter schools. It continues his long and venerable tradition of judging policies by their actual results rather than their merely hoped-for results. Charter schools are not the "magic bullet" solution to the nation's educational ills, but they deliver much better outcomes at a lower cost than traditional public schools—and teachers' unions hate them. That would be puzzling if educating children were what the debate is about. Sowell argues that it is not.

Performance / The book has two main themes: understanding charter schools' performance and understanding why they face opposition.

He tackles the former by carefully matching charter schools to comparable traditional public schools and comparing their results. This comparison is important because any claim that charter schools deliver better results at lower cost immediately runs into the objection that the students who attend the charters are different: they have different backgrounds, different degrees of family motivation, and so on. Sowell, of course, is aware of this and tries to make his comparisons as close to apples-to-apples as the data will allow. His statistical analysis probably would not pass muster at a technical economics journal like the *Economics of Education Review*, but this is a trade press book aimed at an audience of non-specialists. That said, his comparisons are consistent with more rigorous and sophisticated analyses by scholars like Stanford University's Caroline Hoxby. Charter schools, it appears, yield better performance.

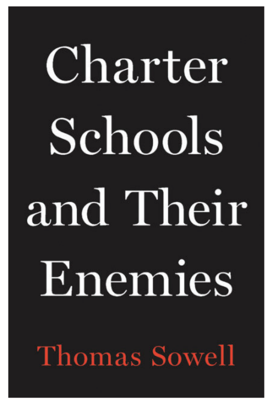
About half of the book consists of commentary and analysis. The other half is comprised of data appendices that constitute an open invitation to both Sowell's friends and enemies to check his math using the data on which he bases his inferences.

He focuses on one of the lingering issues in education research: the black/white "achievement gap." Black and Hispanic students tend not to perform as well on assessment tests as whites and Asians. He argues that while the reasons for this are extremely complex, one cannot overlook the elephant in the room: superlative performance by students who attend the KIPP Academy and Success Academy charter schools that are government-funded but privately operated.

To charter school critics who decry public school funding "following" students to the charter schools, he asks: if a student stayed in public schools but moved from one district to another, should her family continue to pay taxes to the first district? Few people—if anyone—would say yes. So, why should families that leave a traditional public school for a charter be responsible for continuing to pay for what they left?

As is his wont, Sowell insists on evaluating public policies with respect to the results they produce in the world we inhabit rather than the results we hope they would produce in the best world we can imagine. Both his own analysis and the literature he summarizes in the book suggest that, in the actual world, math and language skills are of utmost importance and charter schools deliver achievement in those subjects that traditional schools do not. Even in the face of "structural" political, cultural, social, and economic problems that no reasonable person would deny, charter schools get the job done. He gives as one example a charter school where students outperform counterparts whose family incomes are some five times higher than the charter students' households.

The enemies / Charter school opponent Diane Ravitch makes numerous appearances in the book as one of Sowell's implied interlocutors. She argues—and I think Sowell would agree—that what we observe in student performance is not an "achievement gap" so much as it is an "opportunity gap." It is ironic, then, that she and others wish to deny disadvantaged kids the kinds of opportunities that richer families take for granted. My family lives in the city. If a law were passed requiring our kids to attend city schools, we would quickly move to any of a number of decent-to-excellent suburban school districts. The people who stand to benefit the most from charter schools do not have the same opportunities.



Charter Schools and Their Enemies

By Thomas Sowell

288 pp.; Basic Books, 2020

By far, the staunchest enemies of charter schools are teachers' unions, which see the schools as a threat. New York City school administrators bound by a byzantine union contract find that it is prohibitively costly in both money and time to fire an incompetent teacher—hence the expensive problem of "rubber rooms" where teachers who have been removed from the classroom do nothing but clock in and out and accrue seniority and pension benefits. Charter schools do not have nearly as much difficulty getting rid of problem teachers. Union leader Albert Shanker (1928–1997) put the problem in perspective when he said, "I'll put it this way: I'll start representing schoolchildren when schoolchildren start paying union dues." Union leaders and the politicians they support know which side of their bread is buttered.

When confronted with data on charter school performance, these critics offer a string of "what about" objections. Sowell has little patience for these because, he says simply, schools exist to educate children. He shows that a lot of the objections are overblown. Where some charter school enemies claim the schools essentially are resegregation, he argues first that the racial composition of charter schools follows the racial composition of the districts they inhabit, noting that the segregation difference between charters and others is about one percentage point. The same is true for charters' alleged discrimination against students with disabilities.

He focuses on one of his favorite examples: the remarkable performance of Washington, DC's all-black Dunbar High School between 1870 and 1955. Maybe Dunbar, which "sent a higher proportion of its graduates on to college than any white public high school in the city," is an exception, but it seems more likely that educational excellence does not require rich families, lavish funding, or patronizing white saviors indulging what Daniel Patrick Moynihan called "the soft bigotry of low expectations."

What about enrichment and life beyond math and language proficiency? Again, Sowell notes that contrary to the idea that charter schools are stamping out soulless math-and-language-proficient drones, charter students have at least as many "enrichment" opportunities as their traditional counterparts and likely more. Critics chafe at the emphasis on math and language skills, but as the ever-quotable Sowell writes, "While a mastery of mathematics and English can be a ticket out of poverty, a highly cultivated sense of grievance and resentment is not."

Another objection raised by charter critics is that the schools lack transparency and accountability. This is not an unfair demand given that government contracts are prime opportunities for graft. But Sowell notes that charter schools are "accountable" where it matters most: they must deliver results that please the students and their families.

His discussion brings to light the difference between accountability in a bureaucratic system and accountability in something that at least has the dimmest outlines of a commercial system. Traditional education bureaucracies praise "accountability" and fidelity to specified procedures—credentialing, for example. The market—even one so hamstrung as the "market" for charter schools—is "accountable" in that it emphasizes results. We have been pouring money and master's degrees onto traditional public schools for years without much to show for it. Charters—using less money and non-unionized teachers who do not usually come decorated with credentials—do more with less. Nonetheless, they are tried, measured, and found wanting by their enemies because they are inconsistent with *The Vision of the Anointed*, to borrow the title of one of Sowell's earlier books—and, perhaps most importantly, with the funding prerogatives of the labor movement.

Conclusion / *Charter Schools and Their Enemies* is a classic Sowell performance. The logic is clear, the inferences are driven by quantitative data and other facts, and the writing is razor-sharp. I admit it is not his *best* work, but the man is 90 years old and still sets an intellectual bar that very few people can clear.

As he puts it, "The fact that an idea sounds plausible, and is consistent with the prevailing social vision, does not exempt it from the test of empirical evidence." When he looks at the empirical evidence, he finds that charter schools get the job done in ways that traditional public schools do not. R

Working Papers ➾ BY PETER VAN DOREN AND IKE BRANNON

A SUMMARY OF RECENT PAPERS THAT MAY BE OF INTEREST TO *REGULATION*'S READERS.

Financial Regulation and Behavioral Economics

■ **"Mortgage Amortization and Wealth Accumulation," by Asaf Bernstein and Peter Koudijs. April 2020. SSRN #3569252.**

An important distinction between neoclassical and behavioral economic analysis is the latter's emphasis on "default effects," the tendency of people to remain with whatever situation they were originally assigned. The most famous real-world example is the tendency of individuals to save more in employer-sponsored 401k retirement-savings plans if they are enrolled automatically but can opt out relative to when they are not enrolled automatically but can opt in. Neoclassical economists have responded to this by arguing that such nudges could be offset by a decrease in savings outside the retirement framework, negating the benefit of automatic enrollment.

This paper examines a similar situation: consumers who are forced to purchase mortgages that amortize the principal rather than use mortgages that are interest-only with no amortization. In a neoclassical world, mortgage and non-mortgage savings are fungible. If the neoclassicals are right, forced savings through mortgages would be offset by less savings outside the mortgage framework, whereas if the behavioralists are right net savings will increase.

In January 2013 the Netherlands implemented a requirement that new mortgages be fully amortizing. Prior to 2013, most loans were not fully amortizing, leaving homeowners to refinance or make a balloon payment at maturity. This policy change resulted in a substantial increase in monthly mortgage payments. The Dutch maintain careful administrative records on other consumption and savings, so researchers can use those data to determine if increased mortgage savings are being offset by other savings decreases.

Four years after the regulation, the researchers found that the increased mortgage payments were not offset by reduced savings elsewhere. The policy increased net worth overall. From a quarter to a third of the increased savings was financed through higher labor-market earnings and two-thirds to three-quarters was the result of decreased consumption.

The paper goes to great lengths to ask whether these results are the product of factors other than the mortgage policy. Did those who wanted to save less purchase their homes just before the regulation went into effect? There is no evidence of "bunching" in the number of transactions in the months prior to the regulation. The findings hold for households with substantial liquid assets (suggesting the results are not caused by just non-savers) and across all ages. **—Peter Van Doren**

Corporate Financial Behavior

■ **"Are Corporate Payouts Abnormally High in the 2000s?" by Kathleen Kahle and René M. Stulz. April 2020. NBER #26958.**

■ **"Why Does Equity Capital Flow Out of High Tobin's *q* Industries?" by Dong Lee, Han Shin, and René M. Stulz. February 2020. SSRN#3535841.**

Corporate profits and their division between dividends, stock repurchases, and reinvestment are a source of concern for members of Congress from both parties. These two papers look at issues relevant to that concern.

The first paper asks whether payouts (rather than retention of excess cash flow within the firm) are larger now than in the past. The answer appears to be yes. In the 2000s, annual aggregate inflation-adjusted payouts were three times their pre-2000 level and increased as a percentage of assets (2.7% for 1971–1999 versus 4.1% for 2000–2017) and as a percentage of operating income (18.9% for 1971–1999 versus 32.4% for 2000–2017).

The payouts are higher because firms earn more and pay out more of what they earn. Some 38% of the increase in payouts is from higher earnings and 62% from a higher payout rate, which is exclusively from stock repurchase instead of dividends. Dividends average 14.4% of operating income from 1971 to 1999 and 14% from 2000 to 2017. Net stock repurchases averaged 4.8% of operating income before 2000 and 18.3% from 2000 to 2017.

To assess whether the fundamentals that govern corporate financial behavior have changed, the authors estimate a traditional econometric model of payouts with data from 1971–1999 and then use the results to predict current payouts. The model predicts that real aggregate payouts in 2017 should be $784 billion; actual payouts were $734 billion. So, our understanding of current corporate behavior does not require a complete rethinking of conventional financial theory. Higher payouts are the result of changes in the values of variables that historically have explained corporate payouts: increases in firm age, size, and cash holdings, and decreases in leverage. Corporations are investing less as well, but that is less important in explaining the increase in payouts than the four firm variables.

The second paper examines the transformation of the relationship between Tobin's *q* (equity market value divided by book value) and capital flows. Capital flowed into industries with higher Tobin's *q* over the period 1971–1996. But from 1997 to 2014, capital flowed out of high-*q* industries. The change is from the repurchase of stock after 1997.

These results make little sense if high-*q* industries are the ones with the best investment opportunities and competition leads them to expand up to the point where those opportunities are used up. However, these results do make sense if the dominant firms in high-*q* industries draw rents from scarce assets, so that their high *q* reflects their ability to collect rents rather than an investment opportunity. As long as their cash flows from rents are high enough and management has incentives to maximize shareholder wealth, it is optimal for these firms to use the cash flows to fund payouts. The funds paid out can then be used by investors to invest where their funds have better uses, which is more efficient than if the firms use these funds to invest in poor projects. **—P.V.D.**

TARP and Taxpayers

■ **"Did Banks Pay 'Fair' Return to Taxpayers on TARP?" by Thomas Flanagan and Amiyatosh Purnanandam. May 2020. SSRN #3595763.**

The U.S. Treasury pumped hundreds of billions of dollars into the country's financial firms in 2008–2009 to stabilize the financial system under its Troubled Asset Relief Program (TARP). The conventional wisdom is that the program was fair to taxpayers because it ultimately made money. That is, the $426.35 billion in loans given out during the Great Recession was eclipsed by the $441.7 billion the Treasury received in repayments and from the sale of equities received in exchange for the loans, even after factoring in the $9.5 billion loss on money lent to the auto industry.

The authors of this paper use a different notion of what a fair return should be. They compare the returns realized by the Treasury to what would have been received from market investments with similar uncertainty of repayment over the same period. The preferred equity issued under TARP had the same seniority as the existing preferred equity of the recipient banks, so the market-based returns on the existing preferred equity of the same banks over the same time horizon provide an ideal comparison to TARP's return.

TARP recipients paid 11% annualized return to taxpayers, while the banks' preferred equity annualized return was 39% over the same time horizon. In dollar terms, the difference was almost $60 billion per year. Also, bondholders earned an annualized return of 20% per year despite the lower risk. By this measure, taxpayers were shortchanged.**—P.V.D.**

Bankruptcy and COVID-19

■ **"Encouraging Equity Investments in Medium-Sized Businesses," by Douglas Elliott. Oliver Wyman Policy Paper. May 29, 2020.**

In this succinct paper, Douglas Elliott makes the cogent and possibly urgent point that since the global pandemic began, the U.S. economy has transitioned from a corporate liquidity problem—which the Federal Reserve successfully alleviated—to the cusp of a corporate solvency problem. Unfortunately, solving the new problem will be much more difficult and likely cost more money than the liquidity problem.

Virtually no one anticipated the nationwide shutdown from COVID-19. A wide swath of businesses saw demand for their goods crater or were legally obligated to shut down. For instance, passenger air travel declined 95% in a single month and cruise ships shut down entirely. In most states, restaurants were limited to selling only takeout meals, and even that was impeded by curfews. Most brick-and-mortar retailers such as clothing stores also saw demand plummet.

While large corporations were able to tap credit markets to cover their liquidity needs, many mid-sized and small businesses were not able to do so immediately. To alleviate their capital needs, Congress enacted the Coronavirus Aid, Relief, and Economic Security Act, which created (among other things) the Payroll Protection Program, a funding mechanism that provided small and medium-sized businesses forgivable loans to cover payroll and a portion of other costs for eight weeks.

The Federal Reserve also created a variety of credit facilities to help businesses obtain financing, although credit markets ultimately rebounded from the early days of the crisis and most viable businesses were able to obtain financing from private lenders. Some aver that the Fed's willingness to jump into the market helped the private sector to resume lending.

While the short-term liquidity crunch has passed, we still do not know how long the COVID crisis and the concomitant quarantines will continue, stifling consumer demand across a wide variety of goods and services. The personal savings rate in the United States in May 2020 was 32%, quadruple the level of the previous May and indicating a tremendous decline in consumer demand. Even the most optimistic scenario suggests that vaccines against the SARS-CoV-2 virus—necessary to return the economy to something approaching normalcy—will not be widely available until well into 2021, if then.

It is also worth noting that not all the decline in consumer spending is the result of deferred spending. While people who had planned to buy a car in the second quarter of 2020 will likely do so at some point in the next year, they will not consume more restaurant meals or haircuts to make up for the lost consumption when the pandemic raged. In those cases, the virus and quarantine effectively destroyed demand. The delay until a durable recovery begets a bigger problem, Elliott observes: numerous businesses will become effectively bankrupt as a result, and those situations will need to be adjudicated in some way.

Should they liquidate? / For businesses that end up in that situation in the next year, we may not want there to be a simple liquidation. Many of these businesses would be viable in an ordinary economy. For instance, a restaurant with a favorable lease in a well-trafficked area in the business center of a community that earned a tidy profit before the pandemic will likely return to profitability post-pandemic. Ideally, we would like the restaurant to be managed post-crisis by the same people who ran it pre-crisis because that combination appeared to work. Its creditors likely would not object. They will all be better off if it reopens in a form closely resembling its previous form rather than a bankruptcy judge ordering it liquidated and waiting for a new entrepreneur to obtain the lease, build his own operation, and open a new restaurant a year or two (or more) later.

Fortunately, the U.S. bankruptcy code has Chapter 11, which allows businesses to reorganize and remain open. If it were a big firm, the creditors would receive equity in the company and existing shareholders would be wiped out. Elliott is more concerned about smaller businesses, where it is more difficult to conceive of any resolution that gives creditors an actual ownership stake in a family business. In this case, the restaurant's creditors would—ideally—see the money owed to them reduced to some degree and in return the creditors would receive some share of future revenue. In either case, both the debtor and creditor would share in the money lost because of the pandemic, but also in the post-pandemic revenue that is maximized by using the existing resources in their most efficient way. Both are better off as a result.

While that would be the ideal outcome, it may not be practical in many situations. Elliott notes that there could be hundreds of thousands of potentially bankrupt businesses that will need their bankruptcy to be adjudicated. Our federal bankruptcy courts do not have the capacity to deal with such an increase in demand. Even the model of "prepackaged" bankruptcies, where creditors negotiate an outcome and present it to the court to get its official blessing, may not be sufficiently expedient.

One solution, Elliott offers, would be to quickly create some sort of remediation program whereby the courts deputize arbitrators (retired bankruptcy judges or trustees) who help the businesses and debtors reach an agreement. The court would then give the arrangement its imprimatur without its scarce resources being occupied.

Wheat from chaff / Of course, the world will be sufficiently different post-crisis and many businesses will not be salvageable via reorganization. Some businesses will simply be unable to respond to the new environment, especially those that were not doing so well before the pandemic. For instance, it seems unlikely that we will have nearly the demand for cruises post-pandemic, and the least solvent of those businesses will likely go under.

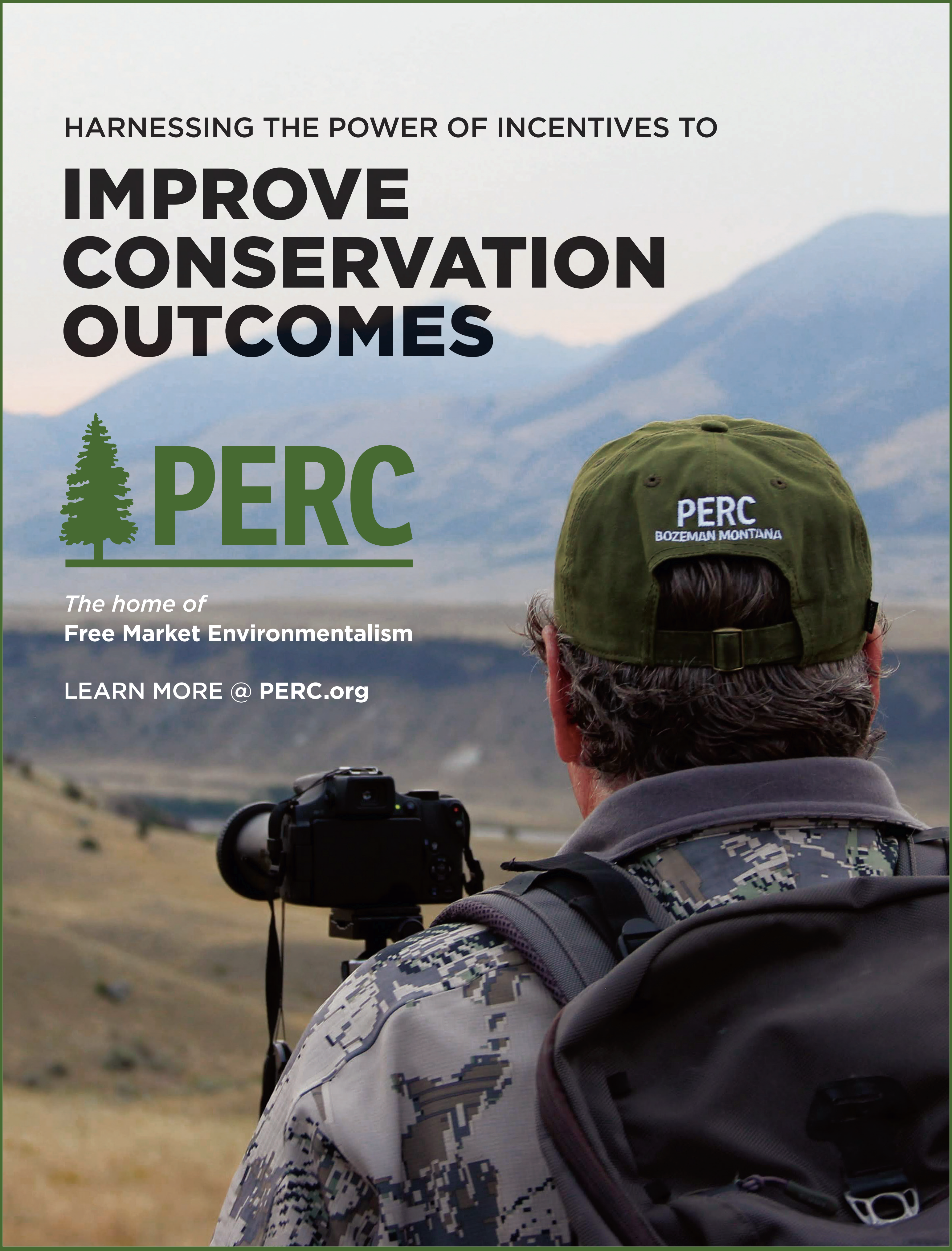
We want to avoid taking steps that would keep nonviable businesses going indefinitely. They would find themselves working to make payments to their debtors and would not have enough money to invest or plan for the future. They would be zombie businesses and keeping them alive would waste investment capital that could go to a better business.

Of course, it can be difficult to readily discern between viable businesses and future zombies. Some restaurants that did fine pre-crisis will not be successful post-crisis, for instance. But any new system we set up to adjudicate these debt issues will not always be able to discern ongoing good businesses from bad businesses. Maybe the cash flow will make it obvious which category a restaurant belongs in, but not always. For this, Elliott suggests dusting off a page from the 1980s–1990s savings-and-loan crisis playbook and instituting some sort of Resolution Trust Authority to make those determinations.

If we do not want a (quasi) government entity picking winners and losers the next time we get in such a mess, Elliott suggests the government might offer insurance against a tail risk economic event. For instance, businesses could buy a type of insurance that would pay a fraction of their losses if gross domestic product were to fall by more than 10% in a quarter. We would then try to ex-ante limit government bailouts in such a scenario.

What is important is to recognize that in this unprecedented economic crisis we have a potential time-inconsistency problem. Government needs to take care that anything it does to salve the short-term economic pain does not concomitantly create long-term problems or establish a precedent that would complicate the country dealing with a similar crisis in the future. This is a message that few want to hear now, but Elliott points out that we may be forced to confront this problem again in the not-so-distant future.

—Ike Brannon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