

BOOK REVIEWS

Alchemists of Loss: How Modern Finance and Government Intervention Crashed the Financial System

Kevin Dowd and Martin Hutchinson

Chichester, United Kingdom: Wiley, 2010, 432 pp.

The combination of the recession and financial crisis of the last few years has led to quite the outpouring of books by economists purporting to explain what happened and why, and how to avoid a repeat performance. This very crowded field has seen a range of quality, but a good number of these books have been quite well done. *Alchemists of Loss* by Great Britain's Kevin Dowd and Martin Hutchinson is another very good treatment of the issues. The authors bring a wealth of experience to their book. Dowd has had a long career as an academic, with much of his work focusing on the history and theory of "free banking" and other forms of financial deregulation. Hutchinson is a longtime financial journalist and has worked in the merchant and investment banking industries in Britain. They have written a comprehensive, fairly detailed, and surprisingly entertaining account of the historical context, theoretical framework, and actual events of the crisis.

At over 400 pages, the book is divided into six sections. In section one, the authors examine the history of "pre-modern" finance and prior crises, and in section two they move to a discussion of "modern financial theory." The third section shows how the theory interacted with the real world over the course of the last few decades, and focuses on the way in which this interaction changed the practice and culture of Wall Street and London. Section four deals with the

crisis proper, the Fed's easy money policy, and other government policies—including U.S. housing policy—that affected the financial system. In section five, the authors offer a narrative of the unfolding of the crisis, and in the final section they devote four chapters to reform and policy, with suggestions for basic policy reform and for changes in financial practices. As this brief summary suggests, their coverage is expansive, which is a real strength of this book in contrast to their competition.

Like other books on the financial crisis, this book largely faults government intervention for the crisis. However, the authors' expert knowledge of the workings of the financial industry supports a critical look at the role of key players in that industry as well. Dowd and Hutchinson provide sharp criticisms of modern financial theories (from CapM to the Efficient Markets Hypothesis), present a detailed discussion of the shift to the corporate form and "managerial capitalism" (in contrast to the old partnerships that once dominated finance), and identify a number of shortcomings of the financial industry.

The authors' narrative of the crisis—from the fall in housing prices in 2006 through the stimulus package—is particularly good. The more time that passes, the more historians will be able to identify significant elements of the story and fill in details. Dowd and Hutchinson's narrative improves on previous ones and offers some interesting counterfactuals. For example, they argue that allowing Bear Stearns to fail in March of 2008 would have likely initiated a banking crisis at that time, but a much smaller one than eventually did erupt in September. They also argue that allowing it to fail would have sent a clear message about not bailing out failing banks in the future, which would have forced troubled banks to get their acts together sooner. Dowd and Hutchinson are highly critical of the Bush and Obama administrations for the way they handled the crisis, and Greenspan and Bernanke fare no better. The authors note that at the end of 2008, the Fed's balance sheet was more like that of "an extremely large, highly leveraged hedge fund" than a central bank following the traditional rules of central banking.

Dowd and Hutchinson offer a whole range of reforms for the banking system. They would prefer a world like that of the highly competitive and largely unregulated free banking systems of 19th century Scotland and Canada until the 1930s, both of which were notably free of bank failures and financial crises (and inflation).

Recognizing that political reality is unlikely to take us there, they also propose some less radical reforms that could prevent future crises. Those include narrowing the Fed's mandate to a single objective of achieving long-run price stability, decentralizing its powers and moving it out of Washington, increasing liability for corporate officers and changing corporate governance (including ending limited liability for shareholders), eliminating deposit insurance (or at least reducing it to give depositors a real stake in knowing the practices of their banks), ending "too big to fail" and the culture of bailouts, and using a "Tobin tax" on "excessive trading" to reduce the size of large banks.

These are all sensible reform steps, with the possible exception of the Tobin tax proposal. In all of their zeal to place blame on bankers and financiers, Dowd and Hutchinson are too willing to see "bigness" as a problem, regardless of the regulatory structure in place. If the other reforms they propose were made, big banks need not be systemically important—that is, their failure would not pose a risk to the overall financial system. Moreover, one should recall that the United States suffered for more than a century with a banking system that was composed of too many *small* banks. Regulations prevented interstate branching, and thus did not allow risk diversification, which increased U.S. bank failures during the 1930s.

Although this book has some small flaws—including a tendency to make some sweeping and uncharitable generalizations about the motivations of various actors, and to take a generally bearish view of the future—*Alchemists of Loss* should take its place as one of the more comprehensive and well-informed books on the financial crisis and how to prevent future crises.

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Rendezvous with Destiny: Ronald Reagan and the Campaign that Changed America

Craig Shirley

Wilmington, Del.: ISI Books, 2009, 740 pp.

Nearly every presidential election in my lifetime appeared to be the most critical in the nation's history, with America's very survival hanging in the balance—at least according to the candidates

involved. In truth, however, only two campaigns for the White House could be described as historically transformative.

The first was Franklin D. Roosevelt's election in 1932 that ushered in the New Deal, which historians like Arthur Schlesinger Jr. viewed as the "Era of Liberal Enlightenment." The second was Ronald Reagan's election in 1980, which conservative historian Craig Shirley sees as the end of "liberalism's half-century reign of dominance."

This is Shirley's second book covering Ronald Reagan's quest for the presidency, a sequel to *Reagan's Revolution*, which tracked the Ford-Reagan battle for the Republican nomination in 1976. Though written by an unabashed Reagan admirer, this volume, like the first, spares no narrative detail, however counter it might run to the iconic image Ronald Reagan now enjoys among nostalgic conservatives (and, given the current state of presidential leadership, not a few of their non-conservative neighbors.)

Recall, for example, Reagan's oft-cited "Eleventh Commandment," the sunny political directive that "Thou shall not speak ill of any Republican." Then read what Shirley tells us the Gipper had to say about Lowell Weicker, one of his early opponents in the 1980 presidential race. The Connecticut senator, asserted Reagan, was not only "a schmuck" but a "pompous no-good fathead."

So much for the myth of the 40th president as a perennial optimist who never met a man he didn't like or eyed a dung heap he didn't think had a pony hidden in it. Of course, it was by confining such acidic commentary to his personal diary that Reagan, a man of passionate, visceral convictions, managed to go through his political days without getting or giving ulcers. Though he had occasional displays of temper, writes Shirley, "Reagan was one of the most incredibly relaxed men in politics."

To be sure, what those around Reagan saw as a genius for relaxing under pressure was viewed by his critics as, variously, laziness, intellectual vacuity, or simple dotage. As one *Wall Street Journal* columnist, touting the rival candidacy of John Connally, put it early in the campaign: "The Californian's increasingly lackluster rhetorical performance and aloofness from both new issues and the GOP's leadership have revived feelings that Mr. Reagan is too old and too indolent for the nation's top job."

With that early campaign image in mind, writes Shirley, reporters following Reagan's travels began using words like "senility" and "staleness" when describing the candidate. They questioned Reagan's "stamina," and "mockingly nicknamed his campaign plane the Ponce de Leon after the explorer who vainly searched for the fountain of youth."

Contributing to this image of a candidate whose best political days were behind him was the front-runner strategy devised by campaign guru John Sears. With polls showing Reagan far ahead in the weeks before the Iowa caucuses, Sears determined that the best course of action "was to take no action. He kept Reagan out of the line of fire in Iowa—or anywhere else, for that matter."

The result of this master strategy was an upset win for George H. W. Bush in the Hawkeye State. As one forlorn Reagan supporter explained the defeat, "It's awfully hard to run a campaign in Iowa without the candidate here."

But the candidate, as both his supporters and opponents soon found out, was a quick learner. Out of patience with the purported experts in charge of his campaign, Reagan "finally got angry," telling a patronizing John Sears, "Damn it, I am running for president of the United States! You're not! Got it?" With that, Sears's days were numbered, as for that matter were those of George Bush as a man on his way to becoming the Republican presidential nominee in 1980.

The turning point, as those of us around at the time vividly remember, came on a frigid February night in Nashua, New Hampshire, when a furious Reagan, his right to address the audience denied by an arrogant debate moderator, turned on his would-be censor "with blood in his eye and thundered, 'I am paying for this microphone, Mr. Green.'" (Full disclosure: This reviewer served as speechwriter and senior advisor to George Bush during the 1980 presidential campaign.) The scene, viewed not only in the Granite State but by voters across the country, effectively put to rest the notion that Ronald Reagan was a candidate "too old and too indolent for the nation's top job."

But the age issue was only the first of three obstacles Reagan had to overcome en route to the White House. Having secured the Republican nomination, there was the matter of the candidate's bringing the party together for the general election, healing the wounds brought on by the fractious infighting of the primary wars.

This Reagan did by choosing George Bush as his running mate, the former congressman/ambassador/CIA director having been the last opponent standing when the primary process was over. It was a logical choice, but as Shirley points out, logic often goes to lunch in the closing hours of a national convention.

Indeed, the author's narrative of Henry Kissinger's frantic effort to frame a "Dream Ticket" of Reagan and former president Gerald Ford is one of the most politically riveting in a book filled with detailed accounts of the backroom high-and-low jinks that go into the making (and, in most cases, un-making) of modern American presidents.

But Bush it was, despite Kissinger's late-night machinations, and though the partnership of Ron the Westerner and George the Yalee seemed unlikely to some (including Nancy Reagan), the two men became in time one of the most compatible political teams in presidential campaign history.

Still, there remained a third obstacle blocking Reagan's path to the White House: the supermedia's depiction of the former California governor as a radical extremist who would bully or blunder the country into a nuclear confrontation with the Russians; in short, a political reincarnation of the Republican presidential nominee 16 years before, Barry Goldwater.

"Radical chic conductor Leonard Bernstein said Reagan's election would unleash the forces of fascism," writes Shirley. "Columnist Judy Bachrach of the *Washington Star* had come up with a term of derision to describe Reagan: 'the Great Communicator.'" Bachrach's derisive term caught on, though not in the way she intended. Reagan's supporters embraced it, given their candidate's skill—shown again in his debate with Jimmy Carter—at breaking through the supermedia word-smog to touch a responsive chord with voters across economic and cultural lines. Out of that, a new political term was born: "Reagan Democrat," a descriptive that signaled the last gasp of the old FDR coalition and the birth of a new era in American politics.

The title of Shirley's book is a poetic trope drawn from a speech by FDR, ironically one of Reagan's favorites. *Rendezvous with Destiny* is more than a journalistic snapshot of the 1980 campaign. It stands as a singular contribution toward understanding the political and ideological dynamics of the New Deal era while providing a

comprehensive study of a presidential election that was indeed one of the most critical in this reviewer's lifetime.

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The Political Philosophy of George Washington

Jeffrey Morrison

Baltimore: The Johns Hopkins University Press, 2009, 226 pp.

In many ways, George Washington represents the most difficult of the Founders to approach. His importance in the American Revolution and the central role he played in the formation of the Republic is beyond dispute. Yet, as so many have pointed out, he becomes more the marble statue than a real man. Thus, it may not be surprising that the most recent spurt of scholarship and popular history concerning the American Founders tends to focus on reinterpretations of the agreed-upon intellectual greats (Jefferson, Madison, and Hamilton) and a rediscovery of neglected Founders (Mason, Morris, and Pickney). Alas, what are we to do with Washington beyond revere?

In *The Political Philosophy of George Washington*, Jeffrey Morrison provides us with a sympathetic and thoughtful accounting of the thinkers and intellectual traditions that most influenced our greatest Founder. Morrison attempts to show just how Washington absorbed and then reflected back to the world the most important political beliefs of his day.

Morrison's strongest point, and one deserving of praise, is to remind us of the complex intellectual milieu in which Washington operated. Today, much scholarly firepower is devoted to untangling the various strands of political thought that tied our Founders together. In what sense were they republicans? Were they liberals? What was the status of Christianity and religion in general among these men?

Although many of these efforts are worthy, the single-minded effort to delineate a specific stream of thought risks losing the sense in which many Americans of the late 18th century saw competing ideas as "harmonizing" (to use Jefferson's apt phrase) rather than in conflict. Many contemporary scholars are not only attempting to map

out the differences in thinking among the Framers—they are positively committed to seeing stark and irreconcilable differences between republicanism, liberalism, and Christianity. Thus, *The Political Philosophy of George Washington* is strongest when Morrison insists that we view Washington's political thought as a reflection of the unity of these traditions, not one of bitter conflict. The author makes a strong case that our first president breathed an "intellectual air" that included all these currents of thought and saw little contradiction between them.

The text is neatly and concisely divided into four chapters and a brief epilogue. Following a long chapter that deals with Washington's political biography, the heart of the book is devoted to developing his understanding of and relationship to classical republicanism, British liberalism, and Christianity. Of course, these three traditions are complex and varied, and Morrison's task is largely devoted to articulating what precise understanding and meaning Washington took from each of them. In the case of republicanism, Morrison argues that Washington had a profound understanding of Roman history and a strong desire to promote public virtue as practiced in antiquity, particularly as articulated by Cicero and Seneca. This version of republicanism was strongly related to a sense of public duty as reflected in the citizen-soldier and a powerful attachment to the agrarian ideal.

However, Morrison effectively shows that as strong as the citizen-soldier ideal was with Washington (he wore his military uniform to the First Continental Congress and openly sought the job of commander of the military forces), he was very cognizant of the need for civilian control of the military and was always concerned about the danger of tyranny. Washington's republicanism was not one of a weak union; he always promoted a reasonably powerful central government. Yet he never lost sight of the need to constrain any abuse of power. Indeed, his life represented the ideal of republicanism. The fame he acquired by not seeking power was justly deserved. The constant comparison of Washington to Cincinnatus is one we should never grow tired of.

In the case of British liberalism, Washington had a strong appreciation of individual and religious freedom. His liberalism was never allied to anarchism and was well aware of the need for an "energetic" government. His republican devotion to union went hand in hand with his commitment to liberty. If a strong republic required

a central government much stronger than originally envisioned in the Articles of Confederation, then government must also provide the institutions necessary to safeguard freedom.

Finally, Morrison explores the tricky subject of Washington's Christianity. While it is certainly true that he was a Protestant, it is unclear exactly what kind he was. In many ways this is the strongest and most convincing part of the book. Morrison draws on an extensive set of Washington's personal letters and observations to argue that he had a thorough knowledge of Scripture, which he was apt to apply liberally to whatever situation arose. Clearly, this was a man who read the Bible throughout his life, and yet his practice of Christianity is somewhat foreign to contemporary notions. He was more comfortable talking about providence and less likely to invoke God or Jesus. Furthermore, he was, after some hesitation, a strong supporter of laws to protect religious expression. We see a man completely at ease with religious ritual and one conversant with the Old and New Testament, and a man who valued religious tolerance—arguing for favorable treatment of Jews and other minority religions.

If this book has a weakness, it is that it is not altogether clear if Washington had as deep and systematic an understanding of republicanism and liberalism as Morrison leads one to believe. The author is really describing what is in the "political air," and he is drawing a reasonable conclusion that a selection of Washington's letters and speeches reflect a strong understanding of that republicanism and liberalism. Sections of the book provide a nice definition and summary of Roman thought and British liberalism that is without exception, yet one wonders how much of that discussion was familiar to Washington. He may have possessed several volumes of John Locke's works, but one cannot be sure he actually read them with any care. Occasionally Morrison reveals a letter that most probably reflects some direct knowledge of Locke, for instance, but it is hard to be sure.

I am not certain that we can be completely confident what the political philosophy of Washington is, as the title promises, if by philosophy we mean a system of thought. Nevertheless, we can discern a general set of beliefs that Washington appeared to hold, and we can talk about his political inclinations.

The real strength of this book is as a corrective to many historians and political scientists who can see only differences in the thinking

of the Founders. Morrison reminds us of the unity that underlay much of the political thinking of the time. In the case of George Washington, he does a great service in familiarizing the reader with the “lost” or “forgotten” works of our first president, which earlier generations knew so well.

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Interpreting China’s Economy

Gregory C. Chow

Hackensack, N.J.: World Scientific, 2010, 288 pp.

This is a valuable book for anyone who wants to gain an understanding of the key forces that have made China the world’s second largest economy and opened the door for millions of people to lift themselves out of poverty. The book is divided into four parts, with the first three devoted to economic analysis of China’s peaceful rise and the fourth reflecting on the U.S. economy and its future.

The book was first published in China and consists of articles that Gregory Chow, Class of 1913 Professor of Political Economy and Professor of Economics, Emeritus, at Princeton University, wrote for leading Chinese newspapers, as well as some lectures he recently gave to Chinese economists. One comes away from this book with a deeper appreciation of the power and elegance of simple economic principles and how they can be applied to complex policy issues.

As a pioneer in the field of econometrics and applied economics, as well as an astute observer of and participant in China’s economic reform movement since 1978, Chow has a wealth of knowledge that he masterfully draws upon to interpret the Chinese economy. Although this book is written for a general audience, parts of it are technical and designed to help educate the rapidly growing number of Chinese students specializing in economics.

First, some background. Gregory Chow (Zhou Zhizhuang) was born in Canton (now Guangzhou), where his father was a successful entrepreneur and chairman of the Chamber of Commerce. The family moved to Hong Kong in 1937, where Gregory, one of seven children, attended primary school. In 1942, the Chows fled to Macao after the Japanese invaded Hong Kong. After the war, they

returned to Canton. In 1948, Gregory left for the United States to study mathematics and economics at Cornell University and then went on to earn his doctorate in economics at the University of Chicago, where he was a student of Milton Friedman's and attended F. A. Hayek's seminar on methodology. He returned to China for the first time in 1980, when he gave lectures on econometrics at the Summer Palace in Beijing. As an overseas member of the State Commission for Reconstructing the Economic System (also known as the Economic Reform Commission), Chow advised Premier Zhao Ziyang. In 1985, the premier asked him to develop a model to forecast inflation, and in September 1988, during a meeting with Milton Friedman, Zhao noted that Chow had recommended the adoption of a flexible exchange rate regime. Since that time, Chow has visited China often and helped modernize economic education. He holds honorary professorships at ten universities and has been awarded three honorary doctorate degrees.

Interpreting China's Economy is not a textbook; it's a collection of essays (many only a few pages long) designed to give readers an insight into how China made the transition from central planning to a market system, and how economic theory can be applied to help interpret the Chinese economy and inform policymaking. A more detailed treatment of many of the topics covered in this book can be found in the author's classic textbook, *China's Economic Transformation*, first published in 2002 and updated in 2007.

The strength of the current book is Chow's ability to condense technical material and long spans of China's history into highly readable essays that cover a variety of issues ranging from the role of entrepreneurs and the nonstate sector in transforming the Chinese economy to the problems plaguing farmers in their quest to obtain more secure property rights. The essays, however, are uneven in quality, and there is some (probably unavoidable) repetition. Moreover, the translation from Chinese into English is spotty at times. Part four, "Thoughts about the American Economy," could have been omitted, as most of the essays in that section have nothing to do with understanding the Chinese economy—although I found the essays on Milton Friedman and the author's view of the U.S. financial crisis worthwhile. Finally, the book would have benefited from an index.

Chow begins by emphasizing the importance of Chinese entrepreneurs in China's transformation. He provides some fascinating

examples of self-made billionaires who flourished as economic freedom increased; but he also notes that corruption continues to result from the government's control over key areas of economic life. A major recommendation is "to allow more freedom for market institutions to evolve by themselves, mainly through the effort of entrepreneurs" (p. 13). To do so, however, China needs a rule of law that would treat "all parties in a legal dispute as equal under the law" (p. 14).

In the area of human capital formation, Chow recommends making it easier for academics to travel abroad, ending local governments' monopoly on the supply of healthcare, and increasing the mobility of labor by reforming the *hukou* (internal passport) system. He also suggests that, in the conduct of macroeconomic policy, the government should allow the real exchange rate to appreciate by using some of its vast foreign exchange reserves to spur development.

In discussing China's economic development since 1989, Chow notes the critical role of human capital and market institutions, and the fact that China could "leapfrog" by adopting advanced Western technology—made possible by opening trade and investment channels and allowing nonstate enterprises (including joint ventures) to prosper. Turning to the agricultural sector, Chow gets to the heart of the problem confronting farmers: "The most serious problem for the farmers is not the poverty or lack of welfare benefits but the violation of their rights by illegal activities of local government and Party officials" (p. 30). Finally, in dealing with corruption, Chow hits the nail on the head by arguing: "An effective way to reduce corruption would be to limit the source of economic power of government officials" (p. 31).

Chapter 6 presents a glimpse of China's long history and reveals how human capital developed, including attitudes toward work and social characteristics. Chow also presents evidence that the Chinese recognized the idea of spontaneous order and the role of markets long before Adam Smith wrote the *Wealth of Nations* in 1776. During the Han dynasty (206 BC–220 AD), for example, we learn that Sima Qian wrote: "There is no need to wait for government orders. . . . When all work willingly at their trade, just as water flows ceaselessly downhill day and night, things will appear unsought and people will produce them without being asked. For clearly this accords with the Way [*Tao*] and is in keeping with nature" (p. 48).

In Parts 2 and 3, the more technical parts of the book, Chow illustrates why he is a master in applying economy theory to policy issues and devising simple but elegant models to test the theories against the facts. What he finds in looking at various policies—ranging from education, healthcare, and urban housing to stock prices, inflation, consumption, and population growth—is that the basic tools of demand and supply, and long-held macro-theories, such as the quantity theory of money, apply across alternative policy regimes.

In Chapter 23, “How to Put ‘Seek Truth from Facts’ [a favorite Communist Party slogan] into Practice,” Chow offers some very sound advice: Honest criticism is essential for the advance of knowledge and for economic development. In particular, “We should think objectively, allowing for the possibility that we are wrong” (p. 150). Without that attitude, learning will not occur and economic policy will suffer. Chow calls for cultivating “an attitude of humility” and learning “not [to] criticize or attack the person, but only criticize his ideas” (p. 151).

Chow practices what he preaches. In a debate (via email) with Stanford economist Ronald McKinnon over the question of whether China should revalue its exchange rate (in July 2005), Chow begins by telling McKinnon, “I have read [your *Wall Street Journal* article] with much interest. I happen to disagree with much of it and provide my comments below. Any reaction from you for my education and enlightenment would be much appreciated” (p. 97). McKinnon argues: “By holding the exchange rate of 8.28 yuan [also known as the renminbi or RMB] to the dollar constant for almost 10 years, and building monetary policy around this anchor, China’s rate of inflation in its CPI has converged to that in the U.S., at a low level of about 2% per year.” Chow politely points out that “China had low inflation not because of the fixed exchange rate but because of the restrictive monetary policy of Zhu Rongji (low rate of growth of money supply) from 1996 to 2002” (p. 98).

In his textbook, and in Chapters 16 and 22 of this book, Chow provides strong evidence that China’s bouts of inflation have been due to excess growth of money and credit. However, he notes that the excessive growth was due to pressure on the People’s Bank of China (the central bank) to keep the RMB undervalued against the dollar. When the PBC buys dollars to peg the RMB at an artificially low rate, the domestic money supply increases unless it is “sterilized”—that is, offset by central bank actions to withdraw the

newly created RMB balances. Using the “Chow test,” one can see that the quantity theory of money, correctly modeled, strongly supports Friedman’s argument that “inflation is always and everywhere a monetary phenomenon.”

Chow’s ability to correctly apply basic economic principles to the Chinese economy, check their validity, and make forecasts shows up in numerous places in this book. In addition to showing the applicability of the quantity theory to China, he argues that “economic behavior is the same in China as in other countries” (p. 86). People respond to the law of demand, whether in the case of education or healthcare, and they base their consumption decisions on permanent, not current, income (Friedman’s permanent income hypothesis).

In Chapter 13, Chow asks, “Is the price of urban housing in China determined by market forces?” Using data from 1987 to 2006, he applies a dynamic model to estimate the impact of demand and supply on housing prices. He finds that most of the variation in demand, and in urban housing prices, was the result of rising real income per capita—not speculation. Whether that is still true today would be worth considering.

There are many other interesting essays in this book. In Chapter 21, Chow examines the reliability of official statistics and concludes they are now generally accurate. In chapter 25, he comments on China’s “population problem” and points out that “the birth rate in China has changed a great deal without the influence of government policy” (p. 175). As incomes rise and relative prices change, people will naturally engage in family “planning.” Chow supports allowing more freedom of choice in this area, and he recognizes the benefits of a larger population for economic development.

Chapter 26 is a very important discussion of “The Problem of Rural Poverty in China.” When the so-called household responsibility system was formally adopted after 1978, farmers became entrepreneurs and township and village enterprises spread rapidly, increasing farmers’ incomes. Nevertheless, institutional constraints in the form of collective ownership of land, state procurement, and the restrictive *hukou* system limited farmers’ opportunities and subjected them to the arbitrary takings by government officials. Various land use laws have been passed to strengthen farmers’ property rights and to end abuses, but the laws have not been effectively enforced. Illegal land seizures by local government officials continue to be a major source of rural discontent. Chow recommends taking

stricter disciplinary actions against Party officials who abuse their power and giving the media more freedom to report abuses.

In Chapter 28, Chow addresses the issue of “How to Solve the Problem of Income Inequality.” His short answer is—not by coercive taxation but by voluntary redistribution. He would create a market for charitable giving using the Internet. A trustworthy private clearinghouse would be established to bring together potential donors and beneficiaries. That virtual network would allow worthy projects to be financed without government intervention, and would narrow the income gap. It’s an idea worth pursuing.

Finally, in Chapter 30, Chow recommends using tradable permits to reduce industrial pollution in China rather than through a command-and-control system. He lays out a plan for introducing a market-based approach to pollution control. Given that state-owned enterprises are the biggest polluters, Chow no doubt would be in favor of privatization along with marketization.

For more than 30 years Chow has been educating Chinese policymakers and students, and has brought his talents to bear on pressing economic policy issues. First and foremost, he is an applied economist with a keen understanding of dynamic economics. In 2001, Princeton honored Chow by naming its Econometric Research Program after him.

Chow’s greatest legacy, however, will no doubt be his influence on the hundreds of Chinese economists he has helped train to think rigorously about the importance of economic freedom, monetary stability, the rule of law, and the role of markets and prices in producing spontaneous order. Moreover, his students will benefit from Chow’s example in practicing the virtue of humility in the search for “truth from facts.”

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The Great Ocean Conveyor: Discovering the Trigger for Abrupt Climate Change

Wallace S. Broecker

Princeton, N.J.: Princeton University Press, 2010, 154 pp.

This interesting book is an in-depth guide to workings of the mind of one of history’s great environmental scientists, Wallace

(Wally) Broecker, of Columbia University. It is strongly recommended for anyone interested in climate change policy. However, it is not an easy read. Despite the somewhat turgid text—and myriad, excruciating, and sometimes unexplained concepts and details—there are several important lessons. The most important of these is that what modern man would think of as dramatic climate change is the rule, not the exception, and we only partially understand, within broad limits, why our climate is so inherently unstable.

The ostensible purpose of Broecker's book is to describe what he calls "The Great Ocean Conveyor" as a major modulator of earth's climate. The Conveyor is a three dimensional ocean current in which warm, surface water migrates from the Pacific, through the Indian Ocean, and ultimately ends up near Greenland, where the cold climate chills it, making it more dense, and sinking it back all the way to Antarctica, from where it gradually re-emerges in the Pacific. Technically this is known as the "Thermohaline circulation" (hereafter, THC).

Having a hard time reading that? Get used to it. A lot the climate information in Broecker's book is very hard to condense into small sentences without losing continuity, and that is the way Broecker writes. In other words, he strives for accuracy and detail at the expense of soundbite prose. Broecker here is doing what many scientists in the public arena will not do: treating his readers like adults genuinely interested in climate and climate change.

Broecker's ultimate goal is to link our inherent climate instability to breakdowns in the THC, particularly around Greenland, where excessive outflows of cold water can slow it down for centuries or even a few millennia. These are the perhaps 20 such "Dansgaard-Oeschger Events" that occurred in the recent ice age, in which Greenland's temperature suddenly fluctuated 20°C (36°F) within a millennium. These stopped about 18,000 years ago as earth's climate suddenly snapped into what is pretty much like the current interglacial period.

There's one major exception. About 12,800 years ago the greatest of known climate anomalies arose (with the exception of the asteroid-mediated disaster that wiped out the dinosaurs 65 million years ago).

It is called “Younger Dryas,” and it has fascinated climate scientists for decades. Much of Broecker’s book is an attempt to explain why it happened, and, ultimately he gives the scientist’s most courageous answer: We don’t know.

The Younger Dryas lasted 1,300 years. Greenland’s temperature dropped as much as 25°C (45°F) over a period of a few decades, some say even within one or two decades. (For perspective, the difference between average January and July temperatures in Virginia is a tad over 39°F.) It was very strong in Europe, a bit less so (but still significant) in North America, and reverberated all the way into the deep Southern Hemisphere (where virtually any climate change runs up against the implacable mass of Antarctica). Broecker can’t pin down the precise reason why the THC broke down enough to initiate the Younger Dryas, but he very clearly makes the argument that the THC was to blame.

Environmental activists often use the Younger Dryas as an example of what could happen as a result of our emissions of carbon dioxide. The analogy is simple—too simple. The Younger Dryas occurred when the earth was warming. The earth is warming. Therefore a Younger Dryas event is increasingly likely as warming continues.

Broecker was once in this camp too, but now says, near the end of this book, that he had “been guilty of crying wolf.” Instead, he thinks such an event is very unlikely in today’s climate. However, he does believe that smaller-scale fluctuations can occur (with or without human influence on the climate) and makes the common assertion that “this might seriously affect the world’s food supply.” I am not so sure this is at all true. Back in graduate school I was involved in a project to determine if the world’s weather patterns could ever produce a peri-global crop failure, and the answer was “no.”

This book is a must read for anyone who thinks they know all about climate change and what we should do about it. Such readers will leave the book much more humbled, thanks to Broecker’s candid work about what we actually know and what we do not understand.

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