FROM RICHARD A. POSNER,
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CHAPTER 10

THE CRISIS OF MACROECONOMICS

One thing we’ve learned from the economic events of the past two years is that macroeconomics, or at least the part of macroeconomics that studies the business cycle, is a weak field. With only a few exceptions, macroeconomists, including the most illustrious, did not anticipate the current depression. And the profession cannot agree what to do about it, or, more precisely, what to do next—continue fighting the depression or move to head off the possible aftershock of inflation and related deficit-engendered woes. “When asked the question: ‘Can you explain what has happened?’ Robert Solow, a winner of the Nobel Prize in Economics, simply shakes his head and says: ‘No, I don’t think that normal economic thinking can help explain this crisis.’” A remark made many years ago by another Nobel-prize-winning macroeconomist, Robert Lucas, has been confirmed: “As an advice-giving profession we are in way over our heads.” In part this may be because macroeconomists’ advice tends to a suspicious degree to be correlated with their politics. “Because noneconomists often favor one policy or another based on their own interests, or prefer economic advice that pretends to certainty, there is an incentive for econo-

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mists to become contending advocates of theories, rather than cool assessors of the state of knowledge.”

Usually if you know whether an economist is liberal or conservative you know whether he favors or opposes the $787 billion stimulus plan and whether he worries more about unemployment than about inflation. This is not the sign of a mature science. Furthermore, the neglect of the informal economic approach taken by Keynes in favor of mathematical models of the business cycle has been a mistake, but so too, as we shall see in this chapter, is the attempt to marry Keynes to the new field of “behavioral economics.”

I have been moved to criticize a number of economists in this book because there has so little self-criticism by economists—a bad sign. Instead we have defensiveness, as in a May 2009 article by Gregory Mankiw that offers the following defense of his profession’s disappointing performance: “It is fair to say that this crisis caught most economists flat-footed. In the eyes of some people, this forecasting failure is an indictment of the profession. But that is the wrong interpretation. In one way, the current downturn is typical: Most economic slumps take us by surprise. Fluctuations in economic activity are largely unpredictable. Yet this is no reason for embarrassment. Medical experts cannot forecast the emergence of diseases like swine flu and they can’t even be certain what paths the diseases will then take. Some things are just hard to predict.”

There is reason for embarrassment—“caught flat-footed” may be an unconscious acknowledgment of that. Mankiw’s defense of his profession misses the point, which is not forecasting error but obliviousness to danger. The medical profession knows that it can’t predict the emergence of a new pandemic, and know-

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5 Id. at 105, 107.
ing this takes precautions, such as the creation of a global early-warning network, the adoption of protocols for minimizing the spread of a new contagious disease, and the development of new vaccines and treatments. And when a new disease appears, the profession swings into action.

The Federal Reserve is not the equal of the Centers for Disease Control, or macroeconomics comparable as a scientific field to public health, medicine, or biology. An economic disease that was not new—namely, the metastasis of housing prices—appeared in the early 2000s and was largely ignored by the economics profession. The bubble burst in 2007 and a recession ensued, the dangerousness of which the profession missed. The near collapse of the banking industry in September 2008 came as a shock to economists both inside and outside the government, as did the failure of the economy to respond to the orthodox treatment—reducing the federal funds rate.

We have discovered that despite the centrality of banking to the economy of a modern commercial society, macroeconomists know little about modern banking and that an understanding of the business cycle continues to elude them as well. If I may again quote Mankiw, writing in February 2009, “I don’t pretend to be enough of an expert, or to be close enough to the facts, or to have a large enough staff, to know what should be done with the banking system, which is at the center of our current economic turmoil. But I am confident that fixing it should be the main focus of policy efforts.”

The economics of the business cycle is a weak area of economics because of the difficulty of conducting cogent empirical studies, stubborn theoretical disagreements (a problem related to the empirical difficulties—the rival theories can’t readily be confirmed or falsified empirically), the complexity of the econ-

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omy, and the high ideological stakes and resulting tendency to the politicization of academic controversy. These are inherent difficulties of business-cycle economics, for which economists should not be blamed. But they can be blamed for underestimating the difficulties and overestimating their understanding. In 2002, referring to Milton Friedman’s theory that mistakes by the Federal Reserve had turned a recession triggered by the stock market crash of October 1929 into the Great Depression, Ben Bernanke, addressing Friedman and his collaborator Anna Schwartz, said: “Regarding the Great Depression. You’re right, we [the Federal Reserve] did it. We’re very sorry. But thanks to you, we won’t do it again.” They’ve done it again. In his presidential address to the American Economic Association the following year, Robert Lucas announced that the problem of depressions had been solved and macroeconomists should move on to other subjects.

Speaking of Milton Friedman, I am put in mind of a remark in his monetary history with Anna Schwartz about the Great Depression:

the literature, and particularly the academic literature, on the banking and liquidity crisis is almost as depressing as that on the contraction in general. Most surprisingly, those whose work had done most to lay the groundwork for the Federal Reserve Act or who had been most intimately associated with its formulation...were least perceptive, perhaps because they had so strong an intellectual commitment to the view that the Federal Reserve System had once and for all solved problems of liquidity. One can read through the annual Proceedings of the American Economic Association or of the Academy of Political Sciences and find only an occasional sign that the academic world even knew about the

unprecedented banking collapse in process, let alone that it understood the cause and the remedy.\textsuperscript{10}

\textit{Plus ça change, plus c’est la même chose.}

In November 2008, shortly after the banking crash, Queen Elizabeth II visited the London School of Economics and asked the faculty why “nobody [had] noticed [before September 2008] that the credit crunch was on its way.” Responding in the unhurried English fashion, on June 27, 2009, seven months after the Queen’s visit, the British Academy convened a forum to answer her question. The answer was delivered in a July 22 letter to the Queen written by two professors at LSE, Tim Besley and Peter Hennessy.\textsuperscript{11} The letter is complacent. Responsibility for the oversight is attributed to “a failure of the collective imagination of many bright people, both in this country and internationally, to understand the risks to the system as a whole.” In other words, everyone was to blame, which means no one was to blame. “Everyone seemed to be doing their [sic] own job properly on its own merit” but no one realized that the individual activities of the “many bright people” had endangered the solvency of the entire global financial system. On the contrary, people were lulled into believing that “financial wizards” had purged risk from the system.

The letter does not mention the economics profession, although one of the authors is an economics professor (Besley—Hennessy is a political historian). The only economic models referred to appear to be “value at risk” models for calculating the risk of loss in an individual transaction.

On August 10 another letter was written to the Queen responding to her question, this one signed by ten English and Australian economists. This letter\textsuperscript{12} criticizes Besley and Hennessy’s

\textsuperscript{11} www.docstoc.com/docs/9919279/3e3b6ca8-7a08-11de-b86f-00144feabdc0-1 (visited Oct. 5, 2009).
letter. It charges that “their overall analysis is inadequate because it fails to acknowledge any deficiency in the training or culture of economists themselves.” It continues that “in recent years economics has turned virtually into a branch of applied mathematics, and has...become detached from real-world institutions and events.” Education in economics has become too narrow, “to the detriment of any synthetic vision,” and Besley and Hennessy say nothing about “the typical omission of psychology, philosophy or economic history from the current education of economists” and mention neither “the highly questionable belief in universal ‘rationality’ nor the ‘efficient markets hypothesis.’”

A more focused criticism would have been more effective. The Queen was asking about the failure to foresee the financial collapse of last September rather than about the health of modern economics in the large. That failure was due in significant part to a concept of rationality that exaggerates the amount of information that people have about the future—even experts—and to a disregard of economic factors that don’t lend themselves to expression in mathematical models. The efficient-markets theory—when understood not as teaching merely that markets are hard to beat even for experts and therefore passive management of a diversified portfolio of assets will almost certainly beat stock picking, but as demonstrating that asset prices are a dependable gauge of value—that there are no asset “bubbles”—blinded most economists to the housing bubble of the early 2000s and the stock market bubble that expanded with it.

And in modeling the business cycle economists ignored not only vital institutional details (such as the rise of the “shadow banking” industry) because such details are difficult to accommodate in mathematical models, but often money itself, on the ground, derived from Say’s Law, that it doesn’t really affect the “real” (that is, the nonfinancial) economy. They ignored key concepts in Keynes’s analysis of the business cycle, such as hoarding, uncertainty, business confidence (“animal spirits”), and workers’
resistance to nominal (as distinct from real) wage reductions in depressions. Lessons of economic history were ignored, too, leading to a belief that there would never be another depression. Even when the banking industry imploded, many macroeconomists denied that it would lead to anything worse than a mild recession. The measures that the government has taken to recover from what has turned into a depression owe little to post-Keynesian economic thinking, and economists cannot agree on what more, if anything, should be done and which of the government’s recovery measures has worked or will work.

Granted, the study of business cycles is only a part of modern economics. Other parts bear significantly on the study of business cycles, such as labor economics, without being implicated in the failures of response to the current crisis. But the management of the business cycle had until the present crisis been regarded as a triumph of modern economics and justification for regarding economics as the queen of the social sciences.

In May 2009 Knowledge@Wharton, the online journal of the University of Pennsylvania’s Wharton business school, published an article entitled “Why Economists Failed to Predict the Financial Crisis.”13 Like the second letter to Queen Elizabeth II, the article criticizes economists for having committed themselves to a model of human behavior that exaggerates rationality. This is a surprising criticism coming from a business school, since so many business-school professors advocate efficient-markets theory in a very strong form. I agree with the criticism but would prefer to avoid fussing over the meaning of “rationality” and its cognates. It is an extremely vague word. A serviceable definition is responding logically and consistently to whatever relevant information can be obtained at a cost less than the expected value of the information. Emphasis needs to be placed on the limited availability (high cost)

of information bearing on many economic decisions, whether by businessmen or consumers, and, as a result, the frequent presence of uncertainty in the sense of risks that cannot be calculated. Uncertainty can lead to “herding” behavior—following in another’s tracks in the hope that the other knows more than one does—or, what amounts to the same thing, “momentum” trading of common stock and other assets. This kind of behavior is sometimes irrational, but often is a rational second-best response to inability to obtain good information to guide one’s decision.

The Wharton article cites a report by eight European economists (known as the “Dahlem Report”) on the failure of the economics profession to foresee the financial crisis. The report states that “the economics profession appears to have been unaware of the long build-up to the current worldwide financial crisis and to have significantly underestimated its dimensions once it started to unfold. In our view, this lack of understanding is due to a misallocation of research efforts in economics. We trace the deeper roots of this failure to the profession’s insistence on constructing models that, by design, disregard the key elements driving outcomes in real-world markets.”

The report notes that “as the crisis has unfolded, economists have had no choice but to abandon their standard models and to produce hand-waving common-sense remedies.” There is indeed a striking contrast between the formalism of modern economic models of the economy and the advice that economists have been giving since the crisis erupted. Essentially they have advised the use of remedies that have been known and applied since the nineteenth century—or disparaged those remedies.

15 Id. at 1
16 Id. at 2
Three articles in the July 16, 2009, issue of the *Economist* magazine criticize the economics profession for its failure to anticipate the financial crisis and the ensuing economic crisis and for its inability to agree on what should be done to speed recovery.¹⁷ Like mine, this is criticism from outside the profession. The articles are worth reading, but they rely too heavily on criticisms from within economics itself, notably from Joseph Stiglitz and Paul Krugman, whose positions are extreme. Unlike conservative economists who oppose any stimulus package, left-leaning economists argue that the stimulus is too small. They began agitating in June 2009 for a second stimulus of perhaps $1 trillion.¹⁸ Without analysis and explanation that they did not offer their readers, the proposal was irresponsible. With the national debt soaring, the question whether the nation could afford another $1 trillion debt was acute. And what would the money be used for? When would it come on line? How would the program be deformed as it wended its way through Congress? The states appear to be facing a budget shortfall of $100 billion (it has since risen by 60 percent), and there is an argument for a federal loan to tide them over. But the other $849 to $900 billion? Could it be spent in the near term, or not until 2011 and 2012, when it might have a strong inflationary effect?

Supporters of fiscal stimulus claim that to the extent it increases output and therefore tax revenues the contribution that its

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cost makes to the deficit is exaggerated. But this is imprecise. The deficit is increased by the full cost of the stimulus, though it may make future deficits smaller than they otherwise would be, which is just to say that deficit projections should take account of the effect of stimulus on government revenue. But the stimulus will not reduce the annual structural deficit—$500 billion, which may grow to $640 billion (see chapter 6)—or the deficits likely to be created by the Administration’s health-care or climate-change initiatives or other ambitious social-engineering programs still to be announced.

Neglect of essential details also shadows the left-leaning economists’ proposal to nationalize (that is, confiscate), rather than bail out, the banks whose risky lending and resulting near collapse precipitated the depression. Government ownership of the immensely complex big banks, even if intended to be temporary, could well be a disaster. Certainly it would have a baleful effect on business morale, and this should worry followers of Keynes, as the left economists purport to be. The day the government took control of the board, management would be wondering—what happens to us? And who will the government appoint to the board? And what will the board do—whom will it appoint to run the company? Who are the smart bankers? And how long will it take the new management to get up to speed? And will the board be profit maximizing, or will it pursue political objectives, as in other nationalized industries? Will it sacrifice profits to mortgage relief, for example?

Krugman’s uncritical enthusiasm for universal health insurance reflects an internal struggle between his economics and his politics, in which the latter usually prevails. He is not a health economist and has offered no analysis of the likely costs of the changes that he favors, which would go much further than the Administration’s current thinking. On the basis of current long-term bond rates he insists that the threat of inflation is negligible in the foreseeable future, and infers from this that the nation can
well afford even bigger deficits than it is running. His analysis is cursory.

Robert Lucas responded to the Economist’s criticisms of the profession.¹⁹ In it he argues that economists will never develop models that will forecast “sudden falls in the value of financial assets, like the declines that followed the failure of Lehman Brothers in September [2008].” The reason is the “efficient markets” theory, which teaches that the prices of financial assets impound the best information about their value. But Lucas’s detour into efficient-markets theory misses the point. The criticism (my criticism, anyway) of macroeconomists and financial economists is not that they failed to predict that the collapse of Lehman Brothers would lead to a fall in stock prices (they were already falling). It is that they disbelieved in asset bubbles and so were oblivious to signs that the rise in housing prices in the early 2000s was a bubble phenomenon—oblivious even though there were plenty of warnings by reputable people²⁰ and a history stretching back to the Great Depression of bank failures, precipitated by risky lending, that had destabilized or threatened to destabilize the economy of the United States and other countries.²¹

And lacking knowledge of or even interest in institutional detail (a lack related to the increasing mathematization of economics and to the type of person attracted to the field by that mathematization), the economics profession did not understand the degree

²⁰ See, for example, Dirk J. Bezemer, “‘No One Saw This Coming’: Understanding Financial Crisis through Accounting Models” (MPRA [Munich Personal RePEc Archive] Paper No. 15892, June 16, 2009), http: mpra.ub.uni-muenchen.de/15892/.
²¹ Nicole Gelinas, After the Fall: Saving Capitalism from Wall Street—and Washington (2009), is a lucid account of the long string of precedents for the financial collapse of September 2008. For a more comprehensive account, see Carmen M. Reinhart and Kenneth S. Rogoff, This Time Is Different: Eight Centuries of Financial Folly (2009).
to which the banking industry was invested in housing and would collapse along with housing prices when the bubble burst. The profession mistakenly believed, moreover, that at the first sign of trouble the Federal Reserve could avert a serious recession by reducing the federal funds rate.

Lucas’s version of efficient-markets theory shares with his own distinctive contribution to macroeconomics—the “rational expectations” hypothesis—an exaggerated belief in the knowledge and foresight of investors and other economic actors. Not that any economist believes that markets are omniscient. The steep rise in oil prices in the wake of the 1973 war of Egypt and Syria against Israel had macroeconomic consequences yet could not have been foreseen. But that is an example of an external shock. No external shock caused the fall in housing and stock prices and the collapse of the banking industry. The housing bubble, the risky capital structures of the banks, lax regulation, and the low personal savings rate were internal U.S. economic phenomena that had been building for many years. (The inflow of capital from China and other trade-surplus countries could have been checked by the Fed’s pushing up interest rates, which would have reduced the U.S. demand for capital.) Neither the markets nor the economists foresaw the consequences.

Lucas argues that until the collapse of Lehman Brothers the risk of a financial crisis was so small that to have recommended “pre-emptive monetary policies on the scale of the policies that were applied later on would have been like turning abruptly off the road because of the potential for someone suddenly to swerve head-on into your lane.” That is not a good analogy. The probability of such a sudden swerve is too slight to justify the costly preventive measure of not driving at all. But the financial crisis had been building since mid-2007 and had turned acute in March 2008 with the collapse of Bear Stearns, yet the Federal Reserve and most economists, including Lucas, did not notice the crisis that was swerving head-on into their lane. Just a few days after Leh-
man collapsed, Lucas expressed skepticism that the economy would slip into a recession\(^{22}\) (where it had already been for ten months), and a few days before the collapse he had expressed skepticism that the subprime mortgage crisis would contaminate the mortgage market.\(^{23}\) Even though he disbelieves in forecasts, he was making forecasts, and they were erroneous.

Lucas says in his *Economist* piece that the Federal Reserve saved the day by pumping cash into the banking system and persuading the Treasury Department to do likewise. He does not mention the other measures taken by the government. He praises Bernanke for having “formulated contingency plans ready for use when unforeseeable shocks occurred.” In fact the Fed made no contingency plans to deal with possible housing and stock market collapses that might shake the economy to its foundations. Its response when the shocks hit with full force last September was prompt, but also improvised and spasmodic, and included the calamitous failure to bail out Lehman Brothers.

That was one blunder Bernanke made, and there are others, none of which Lucas—who is unstinting in his praise of Bernanke—mentions. Nouriel Roubini, while urging Bernanke’s reappointment as Fed chairman, had pointed out that Bernanke “supported flawed policies when Alan Greenspan pushed the federal funds rate...too low for too long and failed to monitor mortgage lending properly, thus creating the housing and credit and mortgage bubbles”; “kept arguing that the housing recession would bottom out soon”; “argued that the subprime problem was a contained problem when in fact it was a symptom of the biggest leverage and credit bubble in American history”; “argued that the

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collapse in the housing market would not lead to a recession”; 
“argued that monetary policy should not be used to control asset 
bubbles,” and “attributed the large United States current account 
deficits to a savings glut in China and emerging markets, under-
stating the role that excessive fiscal deficits and debt accumulation 
by American households and the financial systems played.”

These surprising mistakes—Bernanke is the economics profes-
sion’s foremost student of the Great Depression of the 1930s—
highlight the weakness of business-cycle economics.

Lucas has responded to my criticism of his article in the Econom-
ist in an email that he has authorized me to quote. He says:

I think you are making a big mistake in dismissing the ef-
cient market hypothesis. [Eugene] Fama is not just a theo-
rist; He is a meticulous statistician and data guy. The CRSP 
[Center for Research in Security Prices] data set on stock 
prices that he put together years ago was a great achieve-
ment by itself. He and his students and hundreds of others 
have tested the implications of the EMH [efficient-markets 
hypothesis] on these and other data. I think you owe it to 
yourself to look at some of this evidence before you write it 
off...

The logic is very commonsensical too. If I have infor-
mation that an asset I hold will decline in price between to-
day and tomorrow, I am going to sell today. If lots of others 
have the same information I do, they will sell too. But then 
the entire price decline will occur today. (This does not rule 
out the possibility of a Warren Buffett, who processes way 
more and better information than others do.)

Don’t be put off by the term “efficient” in the EMH. The 
EMH is completely value-free, like the gas laws.

I think if you try to write down exactly what your imagi-
nary bubble-popper will do when he goes to the office every 
day—maybe provide a little institutional detail—you will 
see that he is just a fantasy.

I have been defending the efficient-markets theory for more than thirty years, since I first argued that trustees should be permitted to adopt a buy and hold strategy for their trust portfolios and to rely on diversification to minimize risk, rather than attempting to do so by evaluating the prospects of each individual stock in the portfolio or by trying to time market turns.25 (That is now the general understanding of the law’s “prudent man” rule of trust investment.) But my understanding of the theory is not that the stock market consistently discounts corporate earnings accurately. Just the fact that stock prices gyrate much more than the value of the companies whose stock is traded refutes the notion that the stock market is “efficient” in a strong sense.26 As a matter of theory, moreover, as Grossman and Stiglitz explained long ago, “because information is costly, prices cannot perfectly reflect the information which is available, since if it did, those who spent resources to obtain it would receive no compensation.”27 The weaker notion of efficient markets—that the market is hard to beat—is consistent with the existence of bubbles (not only in stock markets but in other markets, notably the housing market, as well) and of the “momentum” trading that underlies them (“the

trend is my friend’).

One of Keynes’s insights was that many people trade on the basis of what they think other people are trading on. You see prices rising and think the people paying the higher prices may know something about values that you don’t know. You may even be rather confident that rising housing or stock prices are a bubble phenomenon, but if you think that other traders will keep pushing them up you may rationally decide to buy as well, since if you bail out before the bubble bursts you may be leaving a lot of money on the table.

Eugene Fama, whom I mentioned in chapter 1, has criticized me in correspondence for arguing that the rise in housing prices in the early 2000s was a bubble. He points out that real estate prices rose in many other countries as well, including countries in which subprime mortgages are not offered, and that the prices of other assets, including publicly traded stocks and commercial real estate, also rose. Since bubbles have to be financed with savings, he is skeptical that the market value of all assets could have been pushed up just by low interest rates that drained savings into asset purchases. He argues that the so-called bubble in U.S. housing prices was based on expectations of higher future values and that the fall in prices discounted future losses that were expected to result from a recession caused by “real” (that is, nonfinancial) events. He acknowledges however that macroeconomics has never been good at explaining why the shocks that lead to economic downturns occur; he gives, as examples, efforts to explain the Great Depression and the current downturn.

Fama is correct that the bubble was worldwide. Low interest rates were a global phenomenon, and low interest rates caused the

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28 When the Dow Jones Industrial Average appeared to be approaching the magic number 10,000, an equity strategist was quoted as saying: “Will 10,000 make a difference to some people?...It’s psychological, but if enough people act on it, it’s meaningful. The higher the market goes, the more that those on the sideline sit there and are concerned they’re missing something. It takes a while for their fear to wear off.” New York Times, Sept. 29, 2009, p. B1.
bubble. Subprime mortgages contributed it by increasing the demand for housing, but were not essential; low interest rates alone would increase the demand for housing, just as they increased the demand for oil and other commodities. It is not true that an increase in the market value of some class of assets can’t exceed the total savings available for buying the assets. If the price of a house rises, the market value of the other houses in the neighborhood may well rise even though there aren’t buyers for all those houses.

And the current downturn is not the product of some event in the “real” economy, like the oil-price hikes of the 1970s. It is the product of a sharp fall in housing and stock prices that reduced people’s wealth dramatically so that they started spending less, which caused a recession, which became catastrophic when the banking industry collapsed in September 2008.

Defending the Fed’s inaction in the face of asset-price inflation, Fama expresses skepticism that the federal funds rate influences anything other than the inflation component of interest rates. I disagree (see chapter 1), but even if he is right, that more limited influence is critical because changes in the federal funds rate signal the Fed’s inflation expectations and likely response and so influence long-run interest rates. When the Fed raised the federal funds rate to 20 percent in 1981, market interest rates quickly followed; the prime rate rose to 21.5 percent that year and the 30-year mortgage rate to 16.63 percent.

The Fed’s failure to dig the economy out of the hole into which it fell in September 2008 by expanding the money supply to reduce interest rates and by doing so restart economic growth persuaded much of the economics profession to support fiscal stimulus—the Keynesian prescription for speeding recovery from a depression. In a recent book two distinguished liberal economists, George Akerlof and Robert Shiller, reflecting on the current depression, marry Keynes to “behavioral economics” (which we encountered in chapter 5 in discussing the proposed Consumer
Financial Protection Agency) and offer the resulting union as a replacement for the conventional failed monetarist economics.29

The title of the book reflects the authors’ belief that by “animal spirits” Keynes meant “noneconomic motives and irrational behaviors” and that he wanted government to “counteract the excesses that occur because of our animal spirits.”30 That is a misreading. The passage in which Keynes mentions animal spirits, as we know from chapter 8, is not about excesses and does not argue that “animal spirits” should be damped down. It is about the danger of paralysis in the face of uncertainty (“if the animal spirits are dimmed and the spontaneous optimism fades, enterprise will fade and die”). Because businessmen, especially when investing in projects that will not yield an immediate return, are operating in an environment of uncertainty (that is, of risks that cannot be calculated), they need a spurt of confidence—a willingness to take a plunge into a body of cold economic water—in order to steel themselves to invest. Their confidence and hence willingness to invest, and the confidence of workers and hence their willingness to spend on consumption, are diminished when unemployment is high. So, Keynes argued, government should step in and replace lost private demand for goods and services with increased public demand. That would make businessmen more willing to hire and invest and by thus reducing unemployment would increase the willingness and ability of consumers to spend.

Keynes did worry about stock market speculation, because he thought that speculators based their decisions on guesses about the psychology of other investors rather than on which companies had the best prospects and therefore should attract new investment. But he did not relate speculation to an excess of animal spirits.

30 Id. at x.
Since the publication of their book, Akerlof and Schiller have acknowledged that they “cannot say definitely to what degree Keynes would have been sympathetic to our view. Nor does it really matter what he would have thought. We are presenting a new theory of macroeconomics which we think is in the spirit of Keynes, but it is a new theory.”\textsuperscript{31} That is not how they discussed Keynes in their book. They ascribed to him the claim central to their own analysis that “these animal spirits are the main cause for why the economy fluctuates as it does. They are also the main cause of involuntary employment...Keynes’s animal spirits are the keynote to a different view of the economy—a view that explains the underlying instabilities of capitalism.”\textsuperscript{32}

The irony is that the authors rightly criticize mainstream economists for having so far forgotten Keynes that present-day “Keynesian economics” (usually called the “New Keynesian Economics”) bears little relation to Keynes’s actual views. It seems that Akerlof and Shiller are among the forgetful ones. This is surprising because Keynes is a powerful antidote to the kind of over-formalized mainstream macroeconomics that the authors decry.

They list “confidence,” “fairness,” “money illusion,” the temptation to “corruption,” and susceptibility to “stories” as manifestations of “animal spirits” that create bubbles that lead eventually to recessions or depression. Only “confidence” comes without shouting distance of the meaning Keynes assigned to “animal spirits.” People buy common stock when stock prices are rising and they (notoriously) bought houses during the early 2000s when house prices were rising. Since no one (with the rarest of exceptions) can predict the ups and downs of the stock market or the housing market, these purchases must have been motivated, the authors argue, by something other than rational utility maxi-


\textsuperscript{32} Akerlof and Shiller, note 35 above, at ix (footnote omitted; emphasis added).
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mization. But that is not obvious, or implied by Keynes’s usage. Common stocks have generally been a good investment. And since no one is able to time market turns, no one knows when the market is overpriced and therefore when one should sell rather than buy. Indeed, the idea of selling at the “top” of the market is incoherent, because if it were known that stock prices had peaked, no one would buy.

There are plenty of dummies who play the stock market; there is momentum trading by people fearful of missing out on a bonanza; the overwhelming evidence that index funds outperform managed mutual funds has not weaned most investors from the managed funds; newspapers still print, presumably because there is a readership for, stock forecasts by analysts and money managers who have no record of being able to outperform the market; and there is Keynes’s point that smart speculators may trade not on the economic prospects of companies but on their sense of how other traders will behave. But few sophisticated investors (including Warren Buffett) thought that the stock market was overpriced when it peaked in 2007; had they thought that, they would have reduced the amount of stock in their investment portfolios. The problem was not irrationality; the problem was rational ignorance, including ignorance of the Federal Reserve’s limitations as a systemic regulator.

Akerlof and Shiller rightly associate booms with “new era” thinking, but wrongly deem such thinking irrational. Stocks soared in the late 1920s because it was a period of rapid economic growth based on new products such as the mass-produced automobile, new methods of retailing such as the chain store, and new methods of finance such as installment buying and the purchase of common stock on margin. There was no compelling reason to think that existing stock prices reflected an exaggerated expecta-

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tion of increased wealth in the new era. The late 1990s were likewise heralded as a new era, this time on the basis of expectations that dot-com marketing would transform the economy. In both cases the expectations were premature rather than erroneous.

The early 2000s seemed to most observers still another new era, this one based on the seemingly magical conjunction of low interest rates with low inflation, rising asset values, and new financial instruments believed to reduce risk and thus enable greater lending and borrowing. In all three cases the new eras turned out, at least in the short run, to be false dawns, and an asset-price crash ensued. Given the uncertainty of the economic environment, stressed by Keynes, such disappointments are not surprising and do not show that investors are irrational.

Nor are booms the result, as Akerlof and Shiller curiously argue, of “corruption scandals.” How these relate to animal spirits is unclear, but in any event the authors are wrong about the causality. A crash exposes frauds; rarely is it caused by them. Cheap credit and, as a consequence, soaring house values were the immediate causes of the housing bubble and all that followed when it burst. The underlying causes were the deregulation of financial services, lax enforcement of the remaining regulations, unsound decisions on interest rates by the Federal Reserve, huge budget deficits, the globalization of the finance industry, the financial rewards of risky lending—and competitive pressures to engage in it—in the absence of effective regulation, the overconfidence of economists inside and outside government, and the government’s erratic, confidence-destroying improvisational responses to the banking collapse. These mistakes of commission and omission had emotional components. The overconfidence of economists might even be thought a manifestation of animal spirits. But the career and reward structures, and ideological preconceptions, of macroeconomists are likelier explanations than emotion for the economics profession’s failure to foresee or respond effectively to the crisis.
Like Akerlof and Shiller, I believe in bubbles, but I hesitate to seek an explanation for them in such ill-defined and miscellaneous concepts as “variations in the level of trust,” “storytelling and human interest,” “perceptions of corruption or unfairness,” “anger and optimism,” and “social epidemics causing changes in gut instincts and feelings.”

What happened to Occam’s Razor? Do we really need such an assortment of “inconstancies of human thinking” to understand how an investment bubble forms? Isn’t it enough to note that risk and return are positively correlated, that there are different levels of aversion to risk, including negative aversion (risk preference), and that averters tend to be pessimists, risk preferrers optimists? Optimism and pessimism are personality traits rather than choices, but traits influence choices. Some of the optimists are born gamblers, believers in their lucky star drawn to finance because of the positive correlation of risk and return. Some born gamblers are homebuyers rather than financiers and decide to buy a house in circumstances in which if prices fall or even just stop rising their investment will be wiped out. Nothing is gained by calling such businessmen or such consumers irrational; they simply attach different values to the prospect of gain relative to the prospect of loss. Fraud, conflicts of interest, misunderstanding of complex transactions, dumb mistakes, and other human failings were certainly features of the housing and credit bubbles, but these are constants in human behavior.

While for Keynes “confidence” (“animal spirits”) was the key to getting out of a depression, for Akerlof and Shiller it is something to be chilled down in order to prevent booms that might turn into busts. This turning of Keynes upside down may explain the most surprising statement in the book: that “both presidents are heroes of ours”—for the two presidents are Herbert Hoover and Franklin Roosevelt. Both are heroes to Akerlof and Shiller be-

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34 Akerlof and Shiller, note 37 above.
35 Id.
36 Akerlof and Schiller, note 35 above, at 95.
cause they ran budget deficits and created new agencies to regulate the economy. But in the three and a half years of depression during which Hoover was president, confidence drained out of the economy. The depression touched bottom at the end of his term and turned around within weeks of Roosevelt’s inauguration. Hoover’s adherence to the gold standard, and his determination to keep government small (so no Keynesian stimulus) and raise taxes to try to balance the budget, created a rational expectation of continued economic contraction, dampening the economy’s animal spirits. Roosevelt’s decision, made promptly upon his taking office, to go off the gold standard, push up prices (in order to end deflation), and engage in massive (for the time) deficit spending created an expectation of economic recovery. This expectation had positive effects on the economy even before the new policies could take effect. Roosevelt restored confidence, which Hoover had killed, and renewed confidence restarted the economic engine.

It is curious that critics of rational-choice economics should fail to register the emotional difference between Hoover’s and Roosevelt’s responses to the depression. Yet it would be a mistake to equate rationality with absence of emotion. The word “emotional” has overtones of irrationality, but actually emotion is at once a form of telescoped thinking (it is not irrational to step around an open manhole “instinctively” without first analyzing the costs and benefits of falling into it) and a prompt to action that often, as in the case of investment under uncertainty, cannot be based on complete information and is therefore unavoidably a shot in the dark. We could not survive if we were afraid to act in the fact of uncertainty.

Irrationality is not the courage to act. Irrationality is to be found in behavior impelled by the cognitive quirks that we owe to

38 On both points, see my book Frontiers of Legal Theory, ch. 7 (2001).
the human brain’s having evolved in a very different environment from our present one. Why else are we frightened by scary movies even though we know there is no rational basis for fear? There are were no movies in the ancestral human environment (as evolutionary biologists call it). We are poor at evaluating low-probability events because there was little in the ancestral environment that could be done about such events. The irrational sense which merchants exploit that a price of $5.99 is significantly less than $6.00 illustrates the limited value in that environment of ability to evaluate fine differences. Identifying these quirks is a significant contribution of cognitive psychology and behavioral economics to the understanding of human behavior. But they do not explain depressions as well as does rational-choice economics, provided that people are not assumed to be hyperrational.

And provided that we do not give up too soon in searching out the self-interested motives of human behavior. Apparent irrationalities can often be seen as rational once one looks inside the “black box” of an institutional setup and sees the play of self-interest bringing about results that while individually rational disserve institutional goals. While it seems irrational for an investment company to sell underperforming stocks in its portfolio disproportionately at the end of years and quarters (a common practice), we saw in chapter 1 that it may be entirely rational from the standpoint of the portfolio manager.

The complexity of a modern economy has defeated efforts to create mathematical models that would enable depressions to be predicted and would provide guidance on how to prevent or, failing that, recover from them. But the insights of behavioral economics have not done the trick either. Shiller is greatly to be commended for having spotted both the dot-com bubble of the late 1990s and the housing bubble of the 2000s, and for his penetrating criticisms of extreme versions of the efficient-markets hy-
pothesis. But few if any other behavioral economists noticed the bubbles and he and Akerlof offer no concrete proposals for how we might recover from the current depression and prevent a future one. They want credit loosened, but so does everyone else—so did Keynes, who criticized our government for tightening credit in the early stages of the Great Depression.

Akerlof and Shiller invoke “fairness” and “money illusion” in an attempt to explain the behavior of employment and wages in a depression, such as workers’ resistance to wage cuts even when deflation is causing real wages to rise. The authors ascribe such resistance, which in the depression of the 1930s produced a sharp rise in real incomes for many workers while others were on breadlines, to workers’ sense of “fairness” and to “money illusion.” By “fairness” the authors mean the workers’ sense of entitlement to their existing wage and by “money illusion” they mean the workers’ failure to distinguish between the amount of money received as a wage (the nominal wage) and the purchasing power of the money (the real wage). They also argue that employers deliberately “overpay” their workers in order to boost morale and loyalty. But this does not explain why nominal wages are not cut during a depression in order to maintain (not cut) real wages.

As we saw in chapter 3, there is no need to invoke the hopelessly vague word “fairness” in order to explain these phenomena. A worker who rather than being paid a flat wage is paid a percentage of his firm’s income would be unlikely to complain when his wage dropped in a depression; he would know that his wage was variable and he would plan his life accordingly. But if paid a fixed wage he is likely to count on it as a steady source of income. Since depressions are rare and have unpredictable consequences, he won’t have been able to protect himself in advance from the consequence of a depression-induced cut in his wage. He is going to be upset to find that he’s working just as hard or harder but being

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paid less, and he won’t be reassured by being given a lecture on deflation and purchasing power, because he will not understand or believe it. He will be less upset if while his nominal wage remains unchanged, rising prices reduce his real wage. Prices may not be rising in a depression; and reductions in nominal wage are especially resisted because of suspicions of favoritism, discrimination, or simply failure to appreciate the quality and importance of the worker’s work—the last being a particularly serious problem when workers work in teams, which makes it difficult to determine the contribution of each worker to the employer’s profits. And whereas wage cuts make the entire work force unhappy, layoffs make just the laid-off workers unhappy, and since they are no longer on the premises they do not demoralize the remaining work force by their unhappy presence. This explanation for the high rate of unemployment in a depression gives weight to cognitive and emotional factors (workers do not understand deflation, they may be unduly suspicious of the motives for cuts in nominal wages, and unhappy workers can demoralize the workplace) but does not assume irrational behavior.

Airplane manufacturers conduct stress tests on a new airplane’s wings to determine their resilience in the worst turbulence that the plane might encounter, and the Federal Reserve in the spring of 2009 conducted stress tests on major banks to determine whether they could survive a major further decline in the economy. A depression is a stressor. It exposes weaknesses. It exposed the Madoff fraud and it exposed the weaknesses in economics that I have been discussing in this chapter and previous chapters. “The disintegration of financial globalization has produced an intellectual crisis for economists who had been gripped by the idea of market perfectibility and rational foresight.”40 The economists as-

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sured government officials, businessmen, and the general public that everything was fine—they knew how to prevent depressions, there would never be another one. But when the depression hit they said that by the way they had not actually known how to prevent a depression or dig us out of one; they had only pretend-
ed to have understood depressions—depressions are too compli-
cated for economists to be able to model.

We may need the concept of an “economics cycle.” The Great Depression discredited the macroeconomic theories built on Say’s Law, and laissez-faire more generally. Economists became keen to identify macroeconomic and microeconomic market failures. Fiscal policy and monetary policy were assigned the job of bringing about full employment (that is, the elimination of involuntary employment), and regulation was imposed to assure efficient and equitable economic performance in markets that fell far short of the stringent conditions of perfect competition and were in many cases suspected of monopolistic tendencies unless restrained. Government thus was given ambitious economic tasks, but was assumed capable of performing them at tolerable (in some versions at negligible) cost to society.

Then came the “stagflation” of the 1970s, when monetary and fiscal policy signally failed to achieve full employment with or without inflation. Instead it was an era of lackluster economic growth and sharply higher inflation. Skeptics argued persuasively that regulatory and antitrust policies were having the opposite of the intended effect: they were impeding competition, and without achieving offsetting benefits. The pendulum swung the other way, in favor of deregulation, privatization, antitrust retrenchment, and macroeconomic policies that stressed price stability.

Conservative critics of the interventionist era touched off by the Great Depression and the New Deal had complained that the interventionists had succumbed to the “Nirvana fallacy”: that instead of comparing imperfect markets with imperfect regulation, they had assumed that government could correct market imper-
fections infallibly. The critics were right, but succumbed to their own Nirvana fallacy, by persuading themselves that markets were perfect, which is to say self-regulating, and that government intervention in them almost always made things worse.\footnote{I have succumbed to this second Nirvana fallacy in some of my work in economic analysis of law.} The cycle seems about to take another turn, in favor of regulation, but it may be arrested by the conspicuous failures of government revealed by the current depression and the efforts to fight it. Of course government was also thought to have failed in the run up to the Great Depression and the initial (pre-Roosevelt) efforts to mitigate it. But the government that failed conspicuously, the government of Herbert Hoover and the Republican Party, was thought, a little unfairly, the government of no government. The many mistakes made by Roosevelt and the Democrats in fighting the depression were obscured by general satisfaction with the New Deal.

Economists need to curb their ideological preconceptions, but that is not enough. They will not have a good grasp of business-cycle economics until economics is fused with psychology (so Akerlof and Shiller are on the right track, though they are well short of their destination) and political science. The psychology of boom and bust, and the political consequences of booms and (especially) busts, are fundamental to understanding the business cycle, and to moderating it.