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The Rediscovery of the Market

"Market" is one of the most overworked and imprecise words in economics.

James Tobin, "Are New Classical Models Plausible Enough to Guide Policy?"

The term "macroeconomic" will simply disappear from use.

Robert Lucas, Models of Business Cycles

In an age when words took on magical properties, no word flew higher or assumed a greater aura of enchantment than "market." It meant not only the affairs of Wall Street and its sister hubs of global exchange, swelling by the late 1980s with new wealth for those lucky enough to have a foothold in them. The term "market" that insinuated itself into more and more realms of social thought meant something much more modest than the financial markets' churning, and, at the same time, something much more universal and audacious. It stood for a way of thinking about society with a myriad of self-generated actions for its engine and optimization as its natural and spontaneous outcome. It was the analogue to Reagan's heroes in the balconies, a disaggregation of society and its troubling collective presence and demands into an array of consenting, voluntarily acting individual pieces. "You know, there really is something magic about the marketplace when it's free to operate," Reagan told the nation in early 1982 as the motif of limitless dreams was swelling in his speeches. "As the song says, 'This could be the start of something big.'"[1]

"Something big" was a corny touch. Still, not in a century, not since the late-nineteenth-century vogue of Charles Darwin's *Origin of Species,* had the idea of the beneficent results of competition cut so broad a swath through public and academic discourses or been called upon to do and explain so much. Conservatives, who had so often worried about the

amorality of markets where everything could be put up for sale, rediscovered markets' moral and spiritual foundations. Left and right critics of managed capitalism, turning back the page on one of the progressive era's major innovations, took up the cause of market deregulation. Liberal economists, who in the 1960s had imagined steering the macroeconomy through the turbulence of the business cycle, now warned of the futility of opposing market forces. Let the fundamental economic laws be thwarted, they cautioned, and "the market strikes back."[2] In the universities, the analytical tools of microeconomics were employed to extend models of utility-maximizing behavior into virtually every quirk and cranny of human life. Lawyers talked knowingly of Pareto optimality and the Coase theorem; philosophers and political theorists debated analytical models of rational choice. In more and more contexts and in answer to a broader and broader range of questions, one heard now that "the market decides."

The "market" at the center of these debates was a distinctly abstract concept. Business interests in the 1940s and 1950s, crusading to defend themselves from their critics on the left and in the labor movement, had championed the rights of management and the productive powers of the free enterprise "system."[3] They had put the modern, efficient corporation at the symbolic core of mid-twentieth-century capitalism. By contrast, the "market" that came into vogue in the 1970s floated virtually free of institutional or corporate presence. It was not simply an instrumental device, good for certain purposes, clumsily made for others. Whereas governments, it was said, moved by coercion and deliberative politics stumbled through concession and compromise, the market was held out as the realm of freedom, choice, and reason. The market was "a form of unanimous consent arrangement," the chair of Jimmy Carter's Council of Economic Advisers, Charles Schultze, put the new orthodoxy. No change occurred in the market, it was said, but that it left society more efficient than before and every active party to the transaction better off.[4] Self-equilibrating, instantaneous in its sensitivities and global in its reach, gathering the wants of myriad individuals into its system of price signals in a perpetual plebiscite of desires, the ideal market marked off the sphere of exchange as a separate world, perfectionist in its possibilities.

That so many voices should have been drawn to the language of economic analysis in an age whipsawed by economic crisis and structural

economic change was hardly a surprise. From the painful intersection of unemployment and price inflation, the destabilization of the giant, blue-chip corporations, and the flight of high-wage jobs in the 1970s to the Wall Street boom of the late 1980s, the corporate takeover dramas, and the new hegemony of finance capital, economic news was, more than ever, general news. Stock-invested pension funds made everyman and everywoman a player in the finance markets.

The puzzle of the age is not that economic concepts moved into the center of social debate; the riddle is that so abstract and idealized an idea of efficient market action should have arisen amid so much real-world market imperfection. From the sudden worldwide ratcheting up of global oil prices during the Arab-Israeli War of 1973 through the energy crisis of Carter's last years in office, the first part of the age was a period of extraordinary turmoil in the economic markets. By the end of the 1970s the U.S. economy had experienced inflation rates higher than at any time since 1946 and unemployment rates unequalled since the early 1940s. The nation's largest city, New York, and its tenth largest industrial firm, Chrysler, both stumbled into near bankruptcy. The so-called misery index, produced by adding the rates of inflation and unemployment, was a political ploy when Carter invented it in the 1976 presidential campaign to highlight the Ford administration's economic record, but it was real enough to take hold in the public's imagination. It averaged 7 percent during the Kennedy-Johnson years. It averaged 16 percent during Carter's presidency.

Economically, the first half of the 1980s was not much better. Put forcefully into deflationary gear by action of the Federal Reserve in late 1979, the economy veered into its sharpest recession since the 1930s Depression. In April 1982, just as Reagan was celebrating the magic of markets, the Department of Labor announced a monthly unemployment rate higher than any in the 1970s; it would climb past 10 percent by September before it came back, in mid-1984, to the level it had registered when Reagan took office. For many of the world's economies, recovery came still more slowly. The 1980s was a lost decade for the economies of Latin America after the massive debt structure created by international commercial bankers in the 1970s collapsed in the wake of the Mexican government's default of 1982. The European economies that had steered through the inflationary pressures of the 1970s better than the U.S. econ-

omy found themselves with stubbornly high unemployment levels in the decade that followed. Growth came back in the U.S. economy (and more slowly elsewhere): an unprecedented "Great Expansion," as Robert Collins calls it, that would carry forward, virtually uninterrupted, for over twenty years. Global integration of markets and communication proceeded at a pace unimaginable when discussion of the future of transnational corporations had first seriously begun in the 1970s. By the early 1990s, bookshelves were awash in popular accounts of an altogether new age of global capitalism, where the personal computer and satellite-transmitted telephone and television signals had virtually annihilated place, and information and investments now moved instantaneously around the world.[5]

But the emergence of the market as the dominant social metaphor of the age was not a product of the later years of the era, the years of sustained American economic growth and global integration. It was made in the chaotic economic turmoil of the 1970s. Intellectually the process was virtually complete by the time Ronald Reagan took office in 1981. The puzzle of the era's enchantment of the market idea is that it was born not out of success but out of such striking market failure.

A contrived paradox, a reader may object, for clearly many of the core ideas in the resurgent talk of markets in the 1970s United States were old. The concept of a "natural" system of "invisibly" ordered exchange was Adam Smith's long before Friedrich von Hayek or Milton Friedman repopularized it. And yet in subtle and deeply consequential ways the ideal of the market that emerged from the economic confusions of the 1970s—more abstract and decontextualized, employable over a much broader range of human actions—was newer than it superficially appeared. Smith had not opened *The Wealth of Nations* in a London market, amid the din of bargainers' cries and the spectacle of goods laid out for sale; he had opened it, in a chapter on the productive gains achieved through the division of labor, in a pin factory. For Smith and his successors, the focus of economic science was on the production, not the exchange, of wealth. That was the question that opened virtually every English-language economics textbook of the last three quarters of the nineteenth century: how the three great factors of production—land, labor, and capital—worked together to generate wealth, and how that

wealth, in turn, was distributed through three great "classes of the community" (as David Ricardo called them), landowners, capital investors, and laborers. Atomistic as classical political economy appeared to its critics, its very premises sustained a certain sociological and institutional realism, a sense of power and aggregates that persisted even through the height of nineteenth-century individualism.[6]

It was the marginalists of the late nineteenth century who brought something much closer to the modern idea of the market into the center of economic analysis. It was they who turned the core issue from the aggregate production of wealth to the satisfaction of wants, as a myriad of anonymous, disaggregated sellers and purchasers sought each other out through the pricing signals of the economy. It was they who made a pair of intersecting lines on a two-axis diagram into the great visual-conceptual engine of economics pedagogy, unforgettable to even the rankest beginner in a modern economics course, and in so doing helped to inject the notion of equilibrium into the very definition of a market. And yet a fully abstracted mathematical understanding of markets did not yet dominate economics. Even Alfred Marshall, whose *Principles of Economics* of 1890 consolidated the introduction of marginalism into English-language economics, still wrote of markets as physical extensions of familiar city marketplaces—even though the crying of wares might now be done by telegraphed bids and price lists streaming across much larger trade regions.[7] As late as the 1940s, the economist Robert Solow writes, recollecting his introduction to the craft, a student in an up-to-date university economics program absorbed a pluralistic, socially imbedded understanding of markets; one learned to think intuitively of different "kinds of goods, kinds of industries, kinds of labor."[8]

The analytical revolution of the 1950s swept away the older descriptive and institutionalist economics that Solow could still remember and enthroned mathematical reasoning in its place.[9] Paul Samuelson, the young MIT economist most responsible for synthesizing John Maynard Keynes's analysis of business-cycle dynamics into a general system of economics, was himself one of the brightest and most influential of the new economic modelers. His *Economics* of 1948 was to be one of the most extraordinary textbook successes of the century; forty years later Joseph Stiglitz could write that current economics textbooks were still, by and large, "clones of the one great textbook written in this century, Samuelson's."[10]

Yet to crack an economics textbook in the Samuelson mold was to enter a world in which markets were extremely powerful but always imperfect. Into the 1970s, economics textbooks still retained separate chapters for the consideration of agricultural economics and labor economics, which were deemed different enough from markets in the abstract to require their own analytically distinctive treatment. Labor relations received a separate chapter in Samuelson's edition of 1961; so did capitalism's Marxian alternatives.

At the high-status end of the profession, where Keynes's conceptual revolution had been focused, markets were all about imperfection. The macroeconomy, as it first began to be called in the 1940s, was the arena where market inadequacies and public governance met. Stabilizing the aggregate economy's cycles of growth and contraction was, for every economist working in the prevailing neo-Keynesian mold, macroeconomics' work. In the "mixed economy" of the postwar years, macroeconomics gave public policy managers the conceptual and practical tools to even out the volatility inherent in the productive capacities and energies of market capitalism. Macroeconomics' importance was reflected in the textbook convention that macroeconomics should be introduced first, and only later, many chapters on, the approximately realized world of "perfect markets" where the abstract rules of the price system worked.

Textbook publishers, to be sure, learned to color code their chapters to accommodate teachers who preferred to teach the microeconomics of firms and prices first. But Samuelson himself had no doubts about the conceptual order of economics' new realms. Only in conditions of economic stability and relatively full employment, Samuelson advised generations of undergraduates, did the supply-and-demand equilibria work in their textbook simplicity. In times of "substantial unemployment" economics entered a "topsy-turvy wonderland" where the commonsense rules of economic relations ran backward or failed to run at all. Even in ordinary economic times, students needed to understand the "fallacy of composition"—to realize that the laws of aggregate, social economic behavior were often distinctly different from individually modeled economic action. At an extremely high level of abstraction, to be sure, where the Arrow-Debreu theories of "general equilibrium" applied, economies were always in balance. But those theorems were the product of "some heroically abstract assumptions," Samuelson cautioned; their models of

systemwide stability were "not a picture of the real world as we know it." Macroeconomics provided the stabilizing condition for the microeconomic price system to work. That was why for the next thirty years, even in politically conservative textbooks, macroeconomics came first.[11]

Through the 1960s, the neo-Keynesian assumptions codified in Samuelson´s *Economics* dominated the textbooks, the discipline, and the policy discourse. They gave a generation of postwar economic advisers a powerful confidence in the possibilities of macroeconomic management. In the mid-1960s, Arthur Okun of Lyndon Johnson's Council of Economic Advisers remembered, neo-Keynesian economists "were riding about as high a crest of esteem and respect" as economists had ever received.[12] Within another fifteen years, however, both axioms and confidence were rapidly melting away. In place of lessons in the "fallacy of composition," textbook authors were working hard to erase the Samuelson-era distinction between social and individual action and to set macroeconomics on microeconomic foundations. Economic models of perfect price adjustment were an academic growth industry. In political discourse, Samuelson's mixed economy had fallen into sharply distinct parts: markets and government, rhetorically at polar opposites from each other.

Like Adam Smith's pin factory, these were metaphors all. The timeless, placeless, self-equilibrating register of individual preferences that was now more and more often being called "the market" was an abstraction, as complex and intricately manipulable a figure of speech as any of the neologisms in the Keynesian vocabulary. But metaphors are not idle. They "think for us," Donald McCloskey writes.[13] By the end of the 1970s, a new idea of the market, cut free from the institutional and sociological relationships constitutive of earlier economic analysis—from Ricardo's great economic "classes," from Marshall's tangibly imagined Manchester cotton exchange, from Samuelson's government macroeconomic stabilizers—was being called on to do unprecedented amounts of thinking. Under the skin of an old word, something quite new had indeed emerged.

The shift began with strains in the old system of ideas, though not where observers at the time anticipated them. At the back of their minds all economists knew that the macro- and microparts of economic science were not theoretically well integrated, that the aggregate economic data and big computerized forecasting models upon which macroeconomic

analysis depended were analytically remote from the microeconomic behavior of individual economic actors. But the vulnerable point of the system turned out to be not the aggregate demand and investment functions at neo-Keynesianism's core but a recent add-on, a historical extrapolation never fitted out with terribly strong theoretical support called the Phillips curve. The origins of the Phillips curve lay in an inductive study of British wage-price data for the period 1861–1957 which seemed to show that yearly shifts in unemployment and inflation could be mapped along a smooth tradeoff curve, higher inflation rates "buying" lower unemployment levels and vice versa. Broached in 1958 and quickly replicated with post–World War II U.S. data, Phillips's long-term historical tendency was translated into a short-term economic rule in the Samuelson textbook in 1961, and from there into a tool for macroeconomic policy making, just as Kennedy-era confidence in economic management for full-capacity employment was reaching its peak.[14]

Through 1969, as the Johnson-Kennedy economists tried to regulate the inflation-unemployment tradeoff, the economic data complied with the Phillips curve. And then, in the event that, more than any other, structured the economic controversies of the 1970s, the expected relationship fell apart into theoretical chaos. Joblessness rates rose through the politically sensitive threshold of 5 percent and stuck there, while inflation rates, rather than receding to accustomed recession levels, shot up during the oil producers' price shock of 1973–1974, fell back, and then rose precipitously all over again in 1979–1980. The Phillips data danced wildly across the economists' graphs.[15] The expected patterns of the business cycle seemed to disintegrate, its phases colliding into one another in the phenomenon Americans called "stagflation," and the British, caught up in an even sharper version of the same troubles, called "slumpflation."

In the face of these anomalies, there was an extraordinary flailing about for measures of macroeconomic control. Richard Nixon, turning his back on a century of Republican party policy, instituted emergency across-the-board wage and price controls in the summer of 1971, adopting a course outsiders and public opinion pollsters had been urging for months. Gerald Ford convened a special "town meeting" of the nation's leading civic and economic figures in hopes that they could talk their way to a solution. Then, for good measure, he asked all Americans to send him a list of the ten things they themselves were going to do to help

lick inflation. Administrations struggled to persuade union and corporate leaders to stay within voluntary wage and price increase guidelines, despite the consistent ineffectualness of the effort. Throughout the nervous search for economic policy in the 1970s, virtually all the politically viable programs assumed that restoring economic stability was a task of conscious social and institutional compromise. Republican and Democratic administrations alike took it as a matter of course that big labor and big business both deserved a place on the wage and price control boards. As for the public, approval of wage and price controls (sometimes by a narrow margin, sometimes by a wide one) was a constant of the decade; as late as June 1979, a majority of those polled still endorsed them.[16]

But the core problem was not the achievement of a viable political compromise, heroically difficult as that might have been, given the sharply different ways in which high unemployment and high inflation cut through the population. The deeper problem was the collapse of economic predictability. Gerald Ford, who had opened his administration in August 1974 calling inflation the nation's "public enemy number one," came back to Congress five months later to press for a quick tax cut to stave off what his advisers now feared was a looming recession. The slump that Carter's economic advisers predicted when he submitted his economic stimulus program to Congress in February 1977 had turned into an unanticipated reburst of inflation by April, when he suddenly withdrew it.

Macroeconomics in the post–World War II years had tied its prestige to predictive economic models, but their analytical capacity had gone awry. The price movement of the past year "was the most extraordinary in almost a generation," the Council of Economic Advisers reported in 1974; its explanation, the council lamely confessed, "confounded the Council and most other economists alike." The field of macroeconomics itself was in a state of "total chaos," the discipline's most closely watched theorist, the University of Chicago's Robert Lucas, was publicly declaring by 1979. "Nobody has any answers he is confident of," the sociologist Daniel Bell told a *Washington Post* reporter. Even Samuelson was to write of the "failure of any paradigm to deliver the goods."[17]

The economic crisis of the 1970s was, in short, not merely a crisis in management. It was also, and at least as painfully, a crisis in ideas and intellectual authority. An extremely confident analytical system had failed

to explain or to make sense of the unexpected. In time, after the economy emerged from the recessionary wringer of 1980–1983, something like the Phillips curve would return. The Reagan tax cuts of the early 1980s, it would be said, ultimately functioned as a Keynesian demand stimulus, just as the textbooks might have predicted. Conventional macroeconomics did not predict dramatically wrong. What was devastating to the reigning models was that none of their architects knew why they mispredicted.

As the economy unraveled and textbook economic certainties of the 1960s frayed out into confusion and qualification, a new set of claimants pressed into the controversy, battling for recruits and influence, vying to define an alternative theoretical frame for economic analysis. In the circumstances, it was not surprising that many of them should have entailed radically simpler models of society than beleaguered neo-Keynesianism or that they should have hitched their promises to more automatically working processes than the frustrated efforts of the councils of economic advisers. The idea of the self-acting market was ultimately to be borne along on both assumptions.

Of the contenders for Keynesianism's place, monetarism seemed to loom the largest in the 1970s. Until it, too, fell apart in an implosion of its practical and theoretical promises in the early 1980s, it served as a highly effective exploiter of the economic and conceptual troubles of the 1970s and, though it was not itself a very coherent expression of the new market ideas, as a practical rallying point for those who desired one.

The University of Chicago's economics department, where monetarism was born, had been the most important American university holdout against the neo-Keynesian revolution in economic theory. By the 1960s and early 1970s it had gathered the most important cluster of internal exiles to be found in the discipline: George Stigler, Gary Becker, Milton Friedman, and Robert Lucas in the economics department; Aaron Director, Ronald Coase, and Richard Posner in the law school. Milton Friedman's role was not to dominate the department; its emphasis on classical price theory was set long before Friedman arrived on its faculty in 1946, fresh from labors on wartime tax policy. But even in this circle of strong personalities, Friedman was the University of Chicago circle's most forceful politicizer.[18]

Monetarism, as Friedman framed it, was essentially a policy idea trailing a much weaker theory behind it. Beginning as a restatement of an older quantity theory of money, it was given its modern form on the basis of Milton Friedman and Anna Schwartz's historical correlation of movements in money and prices in the United States since the Civil War. Recasting historical experience as predictive law (just as Samuelson was doing at almost precisely the same time with the Phillips curve), Friedman extracted monetarism's policy claim: that the cause of changes in the overall price structure was to be found solely in shifts in the growth rate of the volume of circulating money. In this radically simplified model of aggregate economic behavior, state, society, and institutions all shrank into insignificance within a black box that translated money inputs directly into price outputs. To those who objected to this heroic analytical simplification, Friedman countered that the positive test of economic theory lay strictly in its predictive capacities, not in the superficial realism of its assumptions. Fully developed monetarism was by no means as unsophisticated as it often publicly appeared, but Friedman, a tireless combatant in the policy wars, was his own eager and terrible simplifier. He gave monetarism a mantra—"inflation is always and everywhere a monetary phenomenon"—and a panacea for economic stability: a money-growth rule for central bankers of 3–5 percent a year.[19]

Within the monetarist "counter-revolution," as Friedman was calling his attack on Keynesian business-cycle analysis by 1970, the relationship between monetarist policy and market ideology was, from the beginning, complex. Monetarism was built from economic aggregates down, not up from the microeconomic foundations of individual choice. Focused almost entirely on Federal Reserve Board rule making, its macroeconomics was in its own way as state-centered as Keynes's or Samuelson's, as Friedrich von Hayek, among others, observed. In his social politics, on the other hand, Friedman was a libertarian, unfailingly confident of the processes of society once they were released from government control, and an ingenious promoter of the abilities of markets to revolve questions of social choice. School vouchers, social security privatization, a negative income tax for the poor, and constitutional limitations on government spending were all ideas he helped set in motion and, with boundless energy, worked to publicize.[20]

Critics often pointed out that the two halves of Friedman's project

did not cohere very tightly. For all Friedman's unrelenting criticism of governmental policy as the root cause of economic distress ("Inflation is entirely made in Washington—and nowhere else," he was to charge in 1980), he never seriously proposed abolishing the Federal Reserve, though the logic of his libertarian politics seemed inexorably to lead there, and to letting the financial markets simply work things out.[21] At some basic level, rules preoccupied Friedman more than markets did. Let governments abdicate their discretionary, managerial powers, let them set aside ambitions for social and economic fine-tuning and do their essential work by clear and automatically functioning systems, and markets would do the rest. That social scientists possessed the capacity to deduce the rules of social optimization but not the capacity to administer them might have seemed, in another context, an odd sort of confidence. But as it was, Friedman used his scholarly prestige in monetary theory to give his libertarian opinions an air of economic certainty that he was not at all shy to exploit.

Given monetarism's organized base at the University of Chicago, Friedman's long and easy relationship with politically conservative money, ready access to the media (by 1966 he had landed a berth alongside Paul Samuelson as a regular *Newsweek* columnist), and a public message whose simplicity contrasted strikingly with the qualifications around it, monetarism was an idea with many institutional advantages. Still, without the heating up of inflation, Friedman's prominence on the national scene in the 1970s is all but inconceivable. In a widely circulated analysis in late 1967, when the economic policy establishment still thought full employment an achievable goal of macroeconomic policy making, Friedman had proposed that every attempt to stimulate the economy beyond its "natural rate" of unemployment (or nonaccelerating inflation rate of unemployment, as others would rename it) dissipated not simply into inflation but into accelerating and destabilizing inflation. The precisely managed economy, he seemed analytically to show, could produce only artificially ignited inflation. When the general price level took off between 1967 and 1970, Friedman suddenly stood out as a seer in a kingdom of the blind.[22]

The checking of hyperinflation in Chile by a cadre of University of Chicago–trained economists in the late 1970s provided a second, highly publicized coup for monetarism. Latin America had long been a center of his-

torical and institutionalist economics, which combined to encourage a major state presence in the economy—as protector of domestic markets against external competition, as state entrepreneur and promoter of economic development, and as a buffer for the peasant majorities against the unshielded effects of the price system. When the socialist president Salvador Allende's government was violently overthrown in a military coup in 1973 amid economic turmoil and triple-digit inflation, the ruling generals first turned to the established Chilean economists. But in 1975 they gave over economic management to a cadre of University of Chicago–trained economists who had constructed an "exile" faculty of their own at the Catholic University of Chile. Over the next seven years, "the Chicago boys," as they were known in the Chilean press, used the military's power to work a dramatic transformation of the Chilean economy: shrinking the size of the public sector, slashing economic controls, privatizing the major state industries, eliminating agricultural subsidies, privatizing social security, and sharply restricting labor union rights. Economic inequality grew, but hyperinflation gradually receded. The University of Chicago economists did not hesitate to take credit for the work of their Chilean disciples; Friedman himself gave his blessing to their work in a heavily publicized speaking tour in Chile in 1975.[23]

Monetarism achieved an even greater victory in the late 1970s by capturing the minds of British conservatives. Monetarism's first champions in the United Kingdom were the organizers of the Institute of Economic Affairs, a privately funded player in the global war of ideas. Monetarism was picked up by some of Britain's most prominent economic journalists in 1973–1974, when oil price shocks pushed British inflation rates into double digits. Whipsawed by money and labor pressures, British governments, like their U.S. counterparts, cast about for ad hoc economic measures that continuously fell apart beneath them. By 1975, a year in which the annual inflation rate in Britain reached 24 percent and the year in which Margaret Thatcher seized the leadership of the Conservative party, Keith Joseph, the party's most ambitious intellectual, had publicly committed himself to the simpler tenets of monetarism, carrying Thatcher, still his pupil in economic matters, along with him.[24]

Promising to cure inflation, monetarism relentlessly focused attention on it. In response to monetarist pressure, Federal Reserve officials began announcing money-supply targets in 1975, which, in turn, immediately

took on economic consequence in the calculations of private financial managers. In conservative political circles it became common to pair the socially disastrous consequences of the Great Inflation of the 1970s with the Great Depression of the 1930s and to implicate it in everything from the revolution in sexual mores to the scandals of political corruption. Within the economics profession itself, monetarism was never nearly as strong, even at inflation's height, as it appeared in the news headlines and business columns. In a poll of six hundred professional American economists published in 1979, only 14 percent "generally agreed" with the core Friedmanite position that the Federal Reserve Board should be instructed to increase the money supply at a fixed rate.[25] But as the Phillips curve crumpled and the standard economic forecasting programs misfired, as the policy managers struggled to demonstrate that they were in charge of an economy whose dynamics they professed they no longer understood, as the abandonment of international currency agreements injected a new instability into the global economy, and as the quarrel intensified over who should bear the social and economic costs of the high unemployment–high inflation complex, monetarism's public stature swelled apace.

Monetarism offered a strikingly simple rule for hard times: let the money supply be prudently managed and markets would provide the rest. But when its victory came at the decade's very end, monetarism's reign turned out to be brief and highly turbulent. Margaret Thatcher committed Britain to a monetarist course when she assumed the prime ministership in May 1979; in the fall Carter's new Federal Reserve chair, Paul Volcker, followed suit. Though they effectively snuffed out the inflationary pressures, the process turned out to be disastrous for monetarist practice and theory alike. Between 1979 and 1983, as monetary authorities in both countries did their best to steer by money-supply targets alone, rather than by the usual, eclectic basket of economic indicators, the smooth deflationary landing that the leading monetarists had predicted turned into a classic business-cycle collapse. Squeezed by record interest rates and unemployment levels higher than at any time since the end of the Great Depression, inflation finally tumbled. But even as the general market contraction wrung inflation out of the economies, monetarism's predictive capacities were falling apart. Not only did the relation-

ship between price level and money supply fail to behave predictably under the short-run pressure. Destabilized by the ingenuity of the financial markets in spinning off new money forms, the quantity of money proved impossible to measure. Volcker's Federal Reserve Board abandoned one of its aggregate targets in early 1981 and "temporarily" deemphasized another in October 1982, by which point it was clear in every regard except explicit public announcements that it had returned to discretion and rules of thumb. After a similarly futile chase after a reliable and controllable money measure, Thatcher's ministers publicly threw in the towel in 1986.[26]

Through these controversies Friedman insisted that monetarism, mishandled by its executors, had never really had a proper trial. What most economists took from the experience, however, was the death knell of rule-monetarism: that aggregate money in exchange in modern societies was in practice beyond a central bank's power to estimate, control, or even effectively define.[27] With that, much of the rest of monetarism's larger intellectual structure fell apart. His *Free to Choose* series on PBS in 1980, organized by a former McGovern Democrat and funded by conservative donors, gave Friedman one more highly prominent stage on which to preach his now-familiar compound of aggregate money rules and libertarian politics.[28] But by the mid-1980s, monetarism no longer drew new recruits among economists; even at the University of Chicago, graduate students in economics told interviewers that "people [here] do not look to Friedman's models and try to solve them or work with them."[29]

Monetarism, in short, turned out to be a bulldozer that could raze a building but could not erect one. A powerful collector of anti-Keynesian sentiments, monetarism did a great deal to delegitimize the conventional economic wisdom, to break down the case for macroeconomic fine-tuning, and ultimately to transfer business-cycle management from Congress and the Council of Economic Advisers to Volcker's heirs at the Federal Reserve. Friedman's idea of a "natural rate" of unemployment endured in the economics profession as a standing reminder of the limits of macroeconomic management. The "full employment" dreams that liberals had nurtured from 1946 through the Humphrey-Hawkins Full Employment Act of 1978 were among its most important casualties. The term had all but disappeared from economic theory by the mid-1980s.

But the heavy-weight paradigm battle between monetarism and Keynesianism that was expected to define the era petered out without conclusion.

In retrospect the more consequential struggles over ideas and paradigms took place elsewhere: in the economic retooling of the lawyers, in the universities, and finally in the recapturing of optimism by a new cluster of "supply-side" market populists. Each was shaped by the same inflationary anxieties that fueled the rise and fall of monetarism's fortunes. Each drew on the power of simple ideas in hard and confusing times.

The first of these transformations was the infusion of market models into the law. Law had always been at the foundation of market exchange, setting its rules and property claims, but lawyers had not always known much about economics. Outside specialized enclaves such as antitrust law, their professional discourse had run toward narratives of justice, property, rights, and blame—stories thick in particulars, institutions, and social circumstances. Their domain was the field of dispute adjudication, not economic maximization. By the late 1970s, however, courses in the price system had become a booming enterprise in the law schools, and a new rhetoric of costs and efficiency was bearing down hard on antitrust judgments, liability law, and, most dramatically, regulatory policy—reshaping them all on models of highly idealized markets.

These intellectual shifts in the law were the product of several sources. One was the growing hold of the distinctive antitrust doctrine that had been taught at the University of Chicago since the early 1950s and that emphasized price and efficiency—rather than firm size or market share, as antitrust doctrine since the 1930s had had it—as the market's unambiguous register of monopoly control. Bigness itself worked no economic injury if it were the product of naturally created efficiencies, those schooled in the University of Chicago antitrust doctrine argued. It was the little players in collusion with the government—price-fixing lawyers, union plumbers, medallion taxi drivers, and their like—who were much more likely to try to rig the markets. Spread by the appointment of increasing numbers of economists to the staffs of the Justice Department and the Federal Trade Commission and incorporated into federal jurisprudence, price-grounded antitrust doctrine had effectively won the day by the time Reagan took office.[30]

The single most important text in what came to be called the law and economics movement, however, was a piece published in a fledgling University of Chicago journal in 1960: Ronald Coase's article "The Problem of Social Cost."[31] As the Coase tale was told and retold in the law schools in the 1970s, law students were instructed to imagine a farmer and a rancher working adjacent lands. The rancher's cattle, straying into the farmer's fields, trampled the farmer's grain. The farmer brought suit for damages in court, and the lawyers told the judge complicated stories of blame and responsibility while the judge tried to decide for one side or the other. The analytical surprise Coase inserted into this familiar tort-law story was that if the judge were to keep the economic good of society in mind, it didn't matter which way he decided. For if the judge decided in the farmer's favor, and if there were no costs or obstacles to impede the farmer and the rancher from further bargaining as soon as they left the courtroom, then the rancher had every economic incentive to lessen his liability by paying the farmer to leave some of his closely abutting land fallow. And if the judge decided in the rancher's favor, the farmer had every incentive to lessen his losses by offering the rancher a bonus to run fewer cattle. Either way, Coase demonstrated, the bargain they struck would not only leave each party better off than would be the case under any of the standard legal doctrines at the judge's disposal; it would also leave society better off by maximizing the total product produced—counting the value of the crops and cattle together and subtracting the total expenses the farmer and the rancher each incurred.

The Coase theorem, as others soon named it, was a powerful analytical story, couched in arithmetic that a fifth grader could follow and generalizable across virtually any instance of externalized cost and damage. In all such cases, Coase urged, it was beside the point, as an economist construed it, to ask who was to blame. A noxious factory did no harm without neighbors; the law's traditional narratives of responsibility only confused that kernel of reciprocity. If it cost the polluters more in total to abate a nuisance than it would have cost society to buy out the objecting neighbors so that they could move elsewhere, then the socially efficient answer was that the neighbors should leave and the stink should stay, just as they would if the parties had been left to themselves to bargain their way to an economically optimal resolution. In a world of zero transaction costs, the path of private market transactions, the path of least ag-

gregate social cost, and the optional allocation of society's resources were precisely the same.

The actual field of the lawyer-economists' most interesting work, Coase himself was quick to caution, lay in circumstances much more complex than this, filled with disparities in information, institutional constraints, widely dispersed damages, and severe difficulties in sustained collective action. Summarizing his work on the occasion of his award of the Nobel Prize in Economics in 1991, Coase downplayed his famous "theorem" as a mere thought experiment on the way to much more important issues of the structure of the firms and legal regimes in which economic exchange took place.[32] But for all Coase's subsequent resistance to simple readings of his work, the concept of the social good he introduced into the law was powerfully simple. The social good was a maximization problem in aggregate market value: crops and cattle, property values and pollution-abatement costs, not, he had been candid enough to say, any close assessment of who stood best to bear the pain of the compromise or how unequally matched their resources might have been at the outset.

An outlier in the legal literature in the 1960s, Coase's essay took off in the 1970s as a conceptual formula by which large parts of law's most contested terrain could be reimagined not as questions of harm and restitution but as questions of market efficiency. The most influential of the Coase-influenced texts was Richard Posner's *Economic Analysis of Law,* which ran through a stunningly eclectic array of legal issues—from liability and nuisance law to the justice of widows' dowers to the logic of the common law itself—to argue that in every case the equitable answer lay in following out which course maximized the aggregate social wealth, measured by the prices economic actors put on it. "Can the idea of 'justice' . . . be deduced from the economist's idea of efficiency?" Posner asked, in a rhetorical question that became the hinge of law and economics classroom teaching.[33]

The "yes" of the law's new economizers was, from the beginning, controversial in the law faculties. Critics attacked Posner's equation of social value with willingness and ability to pay—such that polluting a rich man's air counted as a heavier social cost than polluting a poor man's, since it lowered the rich man's property value more. They criticized law and economics' animus against deliberative, political means of social

choice, its indifference to power, and its translation of justice into a pure maximization problem on behalf of an abstraction, "society," so that whenever the gainers gained more in aggregate from a judgment or statute than the losers' aggregate losses one could say that society was better off, without bothering to consider who the winners and the losers actually were. "Maximum wealth, badly distributed, does not lead to maximum happiness," Posner's leading rival in the economic analysis of the law, Guido Calabresi, was writing by 1982.[34] But in a count made at the end of the 1990s of the most cited law writers of the second half of the twentieth century, Posner swept the field with a lead over his nearest rivals of almost two to one.[35]

One of the key factors in the success of the law and economics project was its attractiveness to the new conservative money that began to funnel into the production of ideas in the 1970s. By the early 1980s, William E. Simon's Olin Foundation was carrying an extraordinary weight of the law and economics teaching at the nation's leading law schools—underwriting the salaries of its teachers, subsidizing its journals and lecture series, and paying special scholarships to students taking its courses. The new conservative foundations also financed the summer "camps" in law and economics, organized by Henry Manne, corporation law scholar and a long-time colleague of Milton Friedman in the antistatist Mont Pelerin Society, to which scores of judges, congressional aides, and law professors came in the 1970s and 1980s to retrain themselves in price theory and microeconomic analysis. Copies of Friedman's *Capitalism and Freedom* served as graduation prizes.[36]

But the 1970s boom in law and economics cannot be explained only by its external funders. Nor, as the prominence of Calabresi and other liberals in the effort to apply economic analysis to the law showed, was its appeal confined to business sympathizers and political conservatives. In the wake of the explosive growth of the law and litigation into new domains of consumer protection and product liability, health and environmental regulation, class-action suits and public interest law, where the law's case-by-case rhetoric seemed less and less to comprehend the issues or to offer any larger, socially adequate resolution, law and economics operated as a compelling instrument of simplification. The leading tort law textbook of 1971 warned students that at first glance the cases they would consider would likely appear entirely unrelated to each other and

that the central theme of tort law was "difficult to put into words"; only then did it venture to lead apprentice lawyers through the intricate subdivisions of negligence and the balancing acts by which the social interest might be restored.[37] The language of costs clarified. "No one likes to be at sea with a vague statutory word that seems to leave every decision at the discretion of the judge," the future Supreme Court justice Stephen Breyer was writing by the early 1980s; "the body of economic principle . . . offers objectivity—terra firma—upon which we can base decisions."[38]

The most dramatic instance of the new authority of market models came in public utility law. Public utility regulation had been one of the primary legislative achievements of early-twentieth-century progressives. Alarmed by the predatory power of railroads and utility monopolies, they had forced the price decisions of "natural monopolies" to pass through the judgment of public commissioners. But the regulatory system had been a beleaguered domain for some time. It had been criticized from the right for interfering with business autonomy and, from the 1960s on, criticized even more systematically from the political left as a system of captive government agencies that pliantly did whatever the regulated industries wanted. Long before a serious conservative deregulatory movement took the field, the idea of genuinely disinterested public utility regulation had been thoroughly hollowed out by its radical critics.[39]

Still, had Alfred Kahn moved from the Cornell economics department to the chairmanship of the New York Public Service Commission at any other time than 1974, the context might well have swallowed him up. But with the oil price escalation and the new environmentalist movement destabilizing every long-term power-industry calculation, Kahn succeeded in forcing the state's utilities through a wringer of marginal cost theory. When services were not priced at their actual marginal costs—when electricity consumers paid the same for a unit of electricity at peak summer demand as they did in the slack winter season, or when purchasers of long-distance calls paid more than their service cost and local callers paid less—the price system sent out distorted signals, Kahn insisted; utilities overbuilt plants, certain classes of customers unknowingly subsidized others, aggregate costs rose, and economic resources were wasted. "I do not want . . . to fall [from regulation] into the opposite error of simply substituting the cliché 'leave it to the market,'" Kahn was to write.

But to a great extent his achievement was exactly that: to force upon regulated industries as marketlike a set of rules as his staff of lawyer-economists could devise.[40]

That it might be in the public interest to "distort" the market by subsidizing certain customers or to allocate resources in a democracy by criteria other than cost and market price or even economic efficiency was an open question, of course. But to the extent that the inflation of the mid-1970s could be construed as the piling of thousands of incremental wastes and inefficiencies onto the aggregate cost structure, the drive to remake the rule of law on the model of the market was buoyed by the spiraling price index. It was never as clear as it sometimes seemed that regulation was, in fact, a major factor in the decade's accelerating prices. Murray Weidenbaum's estimate that regulation cost the American economy $100 billion a year circulated widely through conservative circles, but most economists recognized it as a rhetorically exaggerated guess.[41] In the shipwreck of the macroeconomic paradigms, however, regulatory reform became a kind of analytical refuge for policy-oriented economists. At the domestic "summit meeting" on inflation convened by Gerald Ford in the fall of 1974, the panel of invited economics experts divided over every macroeconomic question before it. It could not agree on whether monetary policy was too loose or too tight, whether wage and price controls should be continued or dismantled, or even whether the nation's most pressing problem was inflation or unemployment. Determined to bring a note of professional clarity out of this cacophony, Arthur Okun helped engineer a face-saving consensus on a list of twenty-two modest efficiency and deregulatory reforms which, with varying degrees of enthusiasm, the panelists hoped would "improve the pricing and cost performance of the economy."[42] As with monetarism, deregulation's fortunes were inextricably bound to the inflationary context.

To galvanize the economists' second thoughts about regulation, the lawyers' new interest in markets, and the public's anxiety over inflation into a general movement for regulatory dismantlement took a single, dramatic case, and the airlines provided it. The instance was easy, singular, and well known among economists. Insulated from price competition with one another, protected from upstart competitors by federal regulators, the major carriers had been content to make their assured profits and let the average American ride a bus. In search of a consumer interest

issue in 1975, Senator Edward Kennedy took up the topic of airline pricing in hearings orchestrated by Stephen Breyer, fresh from teaching antitrust law at Harvard. The effort attracted an extremely broad coalition of allies from Milton Friedman to the corporations' critic Ralph Nader. Seeking a consumer advocacy issue of his own, Jimmy Carter brought Kahn to the Civil Aeronautics Board in 1977 to oversee airline price reform. The next year, without waiting for Kahn's reforms fully to take hold, Congress abolished airline price regulation altogether.

With airline deregulation, the singular case became, almost overnight, the general model. In 1979, Breyer was still writing about the need for careful, case-by-case analysis of regulatory policy, matching industry specifics to a wide array of procompetitive policy alternatives.[43] But the power of a generalized idea of automatically working market efficiency ran stronger than Breyer's institutionalist realism. When in the first year of airline price reform, airline fares fell and profits rose, deregulation became, in Martha Derthick and Paul Quirk's words, a "policy fashion," "a buzzword and bandwagon." Between 1979 and 1982, trucking, long-distance bus transport, rail transport, telecommunications, oil, and savings and loan institutions were all substantially removed from regulatory controls.[44] The results were much more mixed (and in some cases, much more costly) than the advocates of wholesale deregulation anticipated. In telecommunications, where cornucopias of new technologies were poised to take advantage of deregulation, the range of consumer options was dramatically expanded. In the savings and loan industry, where the pinch of economic pressure was intense and dishonest operators moved swiftly into the vacuum created by regulatory neglect, the results were disastrous.

Like all legislative fads, deregulation eventually ran out of steam. In environmental policy, employment of market solutions made very little headway, despite the early interest of one of the key environmental lobbying groups, the Environmental Defense Fund. Not until the 1990s were the first significant market-trading systems in pollution employed in federal environmental law, though economists had been insisting on the superiority of pollution markets and pollution taxes over controls since the 1970s. Much of the energy of deregulation turned offshore, as International Monetary Fund and World Bank economists wrote liberalization of economic controls into their preconditions for structural adjustment

loans. At home, in the law school reviews, law and economics–based contributions slowly tapered off after their high point in 1980–1981, when, according to one study, they had accounted for a third of all the articles published.[45]

But if the practical effects of the shift from law to markets were mixed, the intellectual victory was deeper and more enduring. Even the authors of liberal college economics textbooks now routinely began their description of how to think like an economist with set-piece explanations of the economic inefficiencies of regulation. At the law schools and public policy programs, fluency in economic reasoning became a virtually inescapable mark of professional competence. Where law and economics teaching took hold, the proposition that the free play of private interests might better promote maximum social well-being than could the active management of regulators and lawyers moved closer and closer to the default assumption. In its very simplifications, it filled a yearning for clarity that the older, more complex pictures of society could not. Through a conjunction of policy fads and intellectual quandaries played out against the decade's uncertain, inflationary context, in short, a new deference to market dispositions of crops and cattle, tort damages and corporate size, air fares and energy prices had shifted the law's ideological center.

The era's second critical shift in the prestige of market models and metaphors took place within the academic study of economics itself. Obscured by the widely reported conflicts between monetarists and neo-Keynesians, the more lasting event was an effort to turn away from macroeconomics' aggregate categories and try to rethink economics altogether from microeconomic principles outward. Couched initially in terms of time expectations, it ultimately went to the heart of the sociological assumptions imbedded in the Samuelson-era synthesis. Whereas the most prominent practitioners of law and economics undertook to replace a historical-institutional sense of society with a precise and arithmetized conception of economic efficiency, the new intellectual movements in economics pushed to its limits the extent to which society could be analytically dissolved altogether into its individual, utility-maximizing parts.

The idea of human behavior as a system of maximizing rules and calculations was hardly new, of course. In the late 1950s and 1960s, at the high tide of postwar interdisciplinary social science, a small group of theorizers

not shy about their imperial ambitions had begun to apply economistic models across broader and broader ranges of human activities. Where sociology met economics, the University of Chicago's Gary Becker proposed maximization models for a wide variety of behavior—fertility, housework, criminality, and the use of time—that had resisted economic modeling before. In political analysis, Anthony Downs and others began to suggest that legislative behavior could be better understood as an arena for the maximization of the individual utilities of politicians than as a search for a phantom public interest. Game theory moved out of Defense Department circles into philosophy departments, where certain set-pieces—the "prisoner's dilemma," the "tragedy of the commons," the "free-rider problem"—acquired a status as paradigmatically central as Coase's corn and cattle. To all these, the word "rational" began to adhere. For the most ambitious players in the field, indeed, there was nothing other than rational, optimizing behavior. All the "irrationalities" that psychoanalysts had relegated to the unconscious, that anthropologists had relegated to "culture," and that historians had ascribed to mysterious shifts in "values," Becker was arguing by 1976, could be more compellingly explained by shifts in costs played out against stable preferences.[46]

As integral as microeconomic propositions of this sort were to the background assumptions of professional economists, however, they had not played a particularly prominent role in the high-status, macroeconomic wing of the profession, tied as it was to aggregate economic indicators and complex computer modeling. It was a commonplace in the discipline to regret that macroeconomic and microeconomic analyses were not more tightly integrated. But it was only when the macroeconomic models' predictive capacities began to fall apart in the 1970s that a group of insurgent theorists went back to the macro-micro split to ask if the discipline's paradigmatic disarray did not have its roots there.

The most important endeavor in this regard was the "rational expectations" movement that spun out of Robert Lucas's work at Carnegie Mellon University and the University of Chicago in the early 1970s. The conceptual core of rational expectations was simple. Economic actors did not simply react to economic information; rather, Lucas maintained, they learned to anticipate economic actions, decoding the rules of thumb of other economic actors and foreseeing their line of action. Yet if the point was simple, the practical and theoretical consequences were not. Milton

Friedman had already suggested in general terms that anticipation of further inflation radically destabilized the policy makers' capacity for containing it. In 1972, in the elegant mathematics which became a mark of the movement, Lucas proposed that in monetary policy only truly unanticipated changes—decisions that successfully fooled and misled economic actors—actually made a difference in aggregate economic behavior. By the late 1970s, economic theorists were locked in a highly sophisticated argument over whether macroeconomic management was possible at all—whether any act of fiscal or monetary steering was effectual once the foresighted calculations of economic actors had been fully taken into account.[47]

Their rebellion launched so boldly, the rational expectations dissidents were soon in full press against the dominant neo-Keynesian establishment, competing for students, funding, and theoretical elegance. To raise the "Lucas critique" was to demand to know which regime of long-term anticipations an economic proposition incorporated, and it proved a low-cost way to derail a lot of freight. The reigning economic forecasting models, built on nonanticipating hypotheses of economic action, were "useless," it was said. The "entire meaningless vocabulary associated with full employment, phrases like potential output, full capacity, slack, and so on," was fatally flawed as well, Lucas urged. The Phillips curve's misfiring was, by this judgment, only the visible tip of a much more massive conceptual failure to take time anticipation seriously. Lucas's taunt that "Keynesian economics is dead" and that there was not a serious Keynesian under age forty were fighting words, not an accurate description of the profession. But by the time the financial press discovered the rational expectationist controversy at the end of the 1970s, it had shaken economic analysis at its very center.[48]

Under the rhetorical heat and status competition, serious intellectual issues were at stake. Most visible was a contest about time. To the rational expectationists, the assumptions built into Keynesian macroeconomics seemed fatally static. Incorporating game theory into the economics of individual action, they proposed to "dynamicize" economics—replacing its myopic and reactive modal actors, capable of being lured by the surprise of a price shift or tax cut into quick but ultimately counterproductive economic action, with much cleverer, long-term calculators. The rational expectationists' treatment of time was one of several ways in which they

absorbed the economic experience of the 1970s. The economic actors at their models' center were skilled inflation managers: not the producers of the classical economists' imagination, not even Marshall's cotton dealers minding the telegraph at Manchester, but lightning calculators and instant discounters of time, able to work out a life-earnings function on the way to the savings bank, to project with ease the comparative returns of the new global investment instruments coming ever more rapidly on line, or to see through the illusion of a tax cut that someone, sometime, would have to pay back. Rational expectations was economics for an inflationary decade, when the time-dependency of value was a lesson of day-to-day experience.

Integral to these arguments about time, however, was also an argument about markets and equilibrium. For if economic actors really anticipated, as the rational expectationists suggested, discounting in advance the actions of the state economic managers, folding time into their utility calculations, then the systemic slips and friction, the liquidity traps and "sticky" wages, all the structural macroeconomic imperfections that lay at the foundation of the Keynesian interpretation of the business cycle dissolved into an illusion of the theorists. The market that rational expectationist actors would make was an auction market, not unlike the stock market that was now playing such a larger practical and symbolic role in economic life: a place of extraordinarily quick response and instant clearing, where prices, wages, and demand moved with frictionless ease and the optimizing equations were always efficiently at work. In Lucas's mind, information costs kept the perfect equilibration from occurring. But others in the rational expectations camp came closer to insisting that perfect markets were a realistic description of the actual economy than economists had in a century.

Ultimately, the conflict between Lucas and his critics was a conflict about society. Intent on constructing a post-Keynesian, postmanagerial economics for inflationary times, the rational expectations economists let what Samuelson had called "the fallacy of composition" evaporate as irrelevant. Friedman (whose money rule Lucas was ready to defend on pragmatic grounds) had put stabilization of the aggregate money supply at economics' center; Posner and Coase had made an imperative out of aggregate wealth and "total product." But in rational expectations economics, social aggregates virtually vanished. In the Lucas-influenced models, where the behavior of a "representative agent" stood in for the

whole, the Northwestern University economist Robert J. Gordon wrote, "one could move back and forth between the individual agent and the aggregate economy simply by adding or removing 'I' subscripts" without ever stumbling over a coordination or aggregation problem. A graduate student in economics at Lucas's University of Chicago in the mid-1980s put the point more baldly: "The macroeconomics [that we learn] here is very much like microeconomics. We work on individual levels and sum it up." Were the rational expectations project to succeed, Robert Lucas himself urged in 1985, "the term 'macroeconomic' will simply disappear from use." The split between macro- and microanalysis, the discipline's false step of the 1940s, would be allowed to heal. Economics would be rebuilt from the individual actor out, a seamless unfolding of strategic games and "rational" choices.[49]

In the end, the victory was not as simple nor as complete as Lucas envisioned it. Having raised the internal theory wars to a fever pitch by the early 1980s, the anti-Keynesian counterrevolution began to falter. The wrenching effects of the Volcker deflation caught the rational expectationist vanguard by surprise—many of whom had allowed themselves to imagine that genuinely rational actors would see through the game so quickly as to make the transition to a stable price regime all but painless. Lucas won the Nobel Prize in economics in 1995, but his own effort to devise a general business-cycle theory alternative to Keynes's eluded him. The policy-ineffectualness hypothesis, broached in 1975–1976, broke down. The fight for graduate students, which had tipped so strongly toward rational expectations' novelty and mathematical elegance, evened out.[50] By the late 1990s, among the most closely watched parts of the discipline was the new field of behavioral economics, situated at the intersection of psychology and microeconomics, where the limits of economic rationality were the point of study. In the term Herbert Simon had coined in the 1950s, rationality was now more and more often said to be "bounded." Economic actors made decisions by rules of thumb; they systematically misestimated; they satisfied rather than maximized; they did not always play games by selfishly optimizing rules. A new institutional economics also began to take shape, with transaction costs, firm structures, and information imperfections at its core.[51]

But despite these trends, the conceptual frame in economics had clearly shifted. By the time the macro wars had begun to ease in the late 1980s into an array of blends and compromises, the macroeconomists'

indifference to the microeconomics of individual action had been swept away, and theorists of every sort were working hard to place economics on the foundations of individual, "choice-theoretic" behavior. What made the "new Keynesians" (Gregory Mankiw, George Akerlof, Joseph Stiglitz, and Ben Bernanke, among them) the hottest players in the macro field in the late 1980s and 1990s was their ability to generate explanations for Keynesian-scale macroeconomic friction out of the cumulative effects of small individual variations from perfectly rational economic behavior. Employers, they suggested, were reluctant to risk diluting the loyalty of their employees by cutting wages at the first signs of a softening labor market; sellers were reluctant to incur the cost of reposting their entire price menu in instantaneous response to the market's signals; asymmetries in the information available to economic actors were pervasive. The instabilities of the macroeconomy did not reside, as the Samuelson-era textbooks had described it, in an analytical world of its own; models of perfect competition, modestly and cleverly adjusted, could explain them all.[52]

The simpler pictures of the economy that Friedman and Lucas had dreamed of finding dissolved into an ad hoc collection of smaller puzzles and ingeniously modeled solutions. At the same time, Samuelson-era macroeconomics dissolved as well. There were still defenders of the utility of the IS/LM relationship that Samuelson had made famous. But as economics emerged from the disciplinary crisis of the 1970s and early 1980s, its focus was no longer on systemwide stabilization or the interplay of aggregates. Economics was about the complex play of optimizing behavior—a thought experiment that began with individuals and the exchanges they made. Even the "new Keynesians," James Tobin grumbled in 1993, could not stomach large-scale, institutional reasons for market failures. "They suspect that individual irrationalities are lurking somewhere in the theory."[53] The discipline's embedded theoretical frame now belonged to microeconomics: a choice-theoretic universe of myriad near-rational actors. Lucas's confidence that macroeconomics as the Samuelson generation had known it would disappear turned out, when the theory wars finally subsided, to hold an important kernel of truth.

The third group of figures responsible for reviving the rhetoric of the market, the prophets of "supply-side" economics, were products of very

different social contexts than were the university-based law professors or the economic theorists. They were a small group of publicists and autodidacts with their center at the *Wall Street Journal,* who in the turmoil of the paradigms, the yearning for conceptual simplicity, and the eroding confidence in macroeconomic management, succeeded in gaining the ear of the Republican party and a president with a weakness for optimism.

Between those who sold the Republican majority on a massive tax cut in 1981 and the professional critics of Keynesianism there were deep rifts and rivalries. A striking number of the leading organizers of the "supply-side" movement were economic innocents: Robert Bartley, who assumed direction of the editorial page of the *Wall Street Journal* in 1972 with ambitions to make it (as he did) the most sharply conservative editorial page in mainstream journalism; Jude Wanniski, the flamboyant journalist who was Bartley's first associate editor; George Gilder, the self-taught sociobiologist; Jack Kemp, the maverick congressman eager to put a populist face on the Republican party; and Irving Kristol, dean of neoconservative journalism and matchmaker to the new conservative foundations. Robert Lucas dismissed the linchpin of supply-side economics—the Kemp-Roth bill calling for a 30 percent across-the-board cut in federal individual income tax rates—as a "crackpot proposal." Friedman endorsed Kemp-Roth as a tactical brake on government spending but kept his distance from the supply-siders' rationale. Supply-sider Arthur Laffer, in turn, ridiculed monetarism with a napkin diagram, asking how the tiny little box that was M1 could possibly control an aggregate money quantity so much larger.[54]

The gulf between the supply-side popularizers and the economics profession's liberal wing was even vaster. In the most widely read liberal statement of economic policy in 1980, *The Zero-Sum Society,* Lester Thurow argued that what made the major problems facing the late-1970s U.S. economy (inflation, dependency on foreign oil, slow economic growth, over-regulation) difficult to fix was not the challenge of prescribing their solutions. It was that, in an economy of limits, every one of those solutions required that some sector of the population accept a significant reduction in its standard of living. Whatever gimmickry there was in Thurow's title, it caught the long-standing strain of pessimism in the mainstream economics tradition: the reflexive self-reminders that theirs was the science of tradeoffs and scarcity, that whatever the free

lunch being hawked at the moment might be, it was never really free.[55] The achievement of the supply-side amateurs was to recapture the ground of optimism: to make the idea of the market synonymous with boundlessness.

At the outset, drawn together by issues of international currency stability, the supply-side publicists were anti-Keynesian more by conservative reflex than by analysis. Keynes had scoffed at Say's law, the early-nineteenth-century proposition that there could be no "general glut" of goods beyond the markets' capacity to consume. Like Keynes's political antagonists before them, the *Wall Street Journal* circle adopted Say's law as a statement of faith. "Supply creates its own demand" was the supply-side circle's free translation. Economically, it was a meaningless slogan, but it came to stand for a wholesale dissent from the project of steering the economy by manipulation of aggregate demand; a conviction that the goal of economic policy should be promotion of the conditions of investment, work effort, and business growth (the "supply side," they called it); and, finally, a confidence that the key brake to supply-side growth was the marginal personal income tax rate. Release that restraint, and the magic of markets would pull the economy out of all the rest of its troubles.[56]

It was not hard to locate a constituency for a general solicitousness for the "supply side" of the 1970s economy. A corporate lobby for business tax reduction had been gathering muscle since 1975, when the major business lobbying associations began holding regular strategic planning meetings in Washington, D.C. The American Council for Capital Formation, revitalized by the lobbyist Charls Walker in 1975, pressed for capital gains tax reductions. Through the American Enterprise Institute, the Harvard economist Martin Feldstein was finding a broad audience for his studies of the effects of capital gains and social security taxes on the long-term prospects for adequate capital formation.[57] At the grassroots, a new populist constituency, angry at the rising prices, added to the voices calling for tax reduction. Property taxes—subject to the whims of unanticipated reassessment schedules, sudden shifts in tax incidence, and the strains of inflation-fueled paper values—were its flashpoint. The first major grassroots property tax revolt was California's Proposition 13 victory in the summer of 1978, precipitated by clumsy reassessment policies in the Los Angeles region. By 1980, as the antitax rhetoric and organi-

zational experience developed in California spread through the deeply troubled economy, tax-limitation movements had won victories in six more states.[58]

The federal income tax, by contrast, had not been the focus of a powerfully organized lobby. The National Tax Limitation Committee looked to constitutional limits on federal spending as its logical next step, not cuts in federal income taxes. The wealthy had long ago made their peace with high marginal tax rates through tax shelters and income-shielding devices. In Congress, a concern for inflationary "bracket creep" had begun to thread its way into tax bill debates, but the big issue was the balance between federal revenues and expenditures, on which the Republican party record on strict fiscal discipline remained strong. When the Kemp-Roth bill to slash federal income tax rates by 30 percent was introduced in 1978, proponents were able to line up a core of favorable witnesses, including a handful of maverick academic economists, two former Council of Economic Advisers chairs, and Alan Greenspan, then a private investment consultant. Feldstein filed a terse and studiedly neutral statement. But most of the business economists were skeptical. A "most dangerous . . . experiment," the Chamber of Commerce's head called it; "irresponsible and demagogic," First Boston Corporation's managing director cautioned. Not even Kemp-Roth's backers testified at the bill's hearings that it would set off an economic renaissance. What most of Kemp-Roth's supporters envisioned in the summer of 1978, rather, was a kind of jujitsu politics in which, in cutting off Congress's revenue stream, the voters would force a correspondingly drastic shrinkage in federal spending. To most of the business economists this was an act of "economic brinkmanship," and, risk managers by profession, they resisted.[59]

The task of organizing the tax resentments of the late 1970s behind the project of a massive cut in federal income taxes was, in short, no small project. Layers of conservative practice and conviction stood in the way. The *Wall Street Journal* group had no patience with the Republican party's traditional commitment to making spending cuts first. Jack Kemp heralded a new era of "dynamic" economic thinking that would leave behind the "static" balanced-budget thinking of the past. Laffer was famously sure that almost any tax cut would pay for itself, though almost no other professional economists agreed with him. The achievement of "the boys who cried Nirvana," as the *Boston Globe*'s David Warsh called

them, was to force the tax cut bill past this impasse by inventing a new rhetoric of populist market optimism.[60]

Two writers figured essentially in this task. The first, Jude Wanniski, was the supply-side movement's Henry George, a self-taught economic publicist of one idea. Economics was so simple, he wrote, that children knew its essentials from infancy. Think of a coconut gatherer and a fisherman on a Pacific island trading goods with each other, and ask if either would work so hard if some agency were to reach in from outside to seize the last hour's worth of fish and coconuts. This was *The Way the World Works:* a society of economic nomads living in a world composed purely of individual labor and individual exchange. Drive the "wedge" of taxation into this system and people stopped working or slipped off the books into the barter economy. Release the wedge throughout the nations of the world, Wanniski wrote, and work and savings efforts would rebound and global peace and unimagined prosperity would bloom.[61]

Whereas Wanniski was the supply-side movement's gifted simplifier and panacea salesman, George Gilder, whose *Wealth and Poverty* shot onto the best-seller lists in early 1981, was its Walt Whitman, celebrator of the entrepreneurial future that tax cuts would bring. An even more marginal figure than Wanniski, Gilder was sure that the argument for diminishing returns was wrong and that the application of mathematics to economic enterprise from the early nineteenth century forward distorted the matter entirely. The idea of society as a zero-sum game, he wrote, "strikes at the living heart of democratic capitalism." Classical economics' fatal mistake, he wrote, had been to emphasize the static intersection of supply-and-demand curves rather than "the turbulent process of launching new enterprise." Tax cuts were not about greed, Gilder insisted, but about altruism. They were about the nurture of a new entrepreneurial "economy of faith," ready to leap from every innovator's imagination into economic reality if only the "doggedly obstruct[ive]" practices of government would get out of the way.[62]

These efforts to channel the economic resentments of the late 1970s into a vision of a reindividualized economy, hurtling on toward a limitless future, would have been bootless without institutions and patrons. Kristol opened the pages of *The Public Interest* to Wanniski's exposition of the Laffer curve in the winter of 1978 and helped Wanniski obtain a berth at the American Enterprise Institute. The Smith Richardson Foundation provided grants to enable both Wanniski and Gilder to finish their books.

Kemp and Bartley gave *The Way the World Works* a major boost in new right political circles and the nationally syndicated conservative newspaper columns. Their biggest catch was the prime optimist of 1980, Ronald Reagan, who made sure that a copy of *Wealth and Poverty* was presented to each of his new cabinet members. In the winter of 1981, as the administration's economists struggled to produce forecasts capable of integrating tax cuts on the Kemp-Roth scale into an economically plausible future, and the Treasury economists and the Council of Economic Advisers' economists were unable to agree on a coherent budget rationale, Gilder, the economic naïf, was commissioned to write the introductory section of the administration's *Program for Economic Recovery.* Although in the end Gilder's preface was not used, it was a telling story. In a pinch during the fierce debates over budget cuts in the winter and spring of 1981, when an unavoidable tradeoff reached the president for decision, Reagan's instinct was to believe that the economy, its entrepreneurial spirit unleashed by the new tax cuts, would surely bring in more revenue than his experts imagined.[63]

The supply-side publicists' accomplishment was broader than simply the capture of the president. The supply-siders spoke to a widespread public weariness with being hectored with hard choices and uncertain forecasts. They gave voice to a rising distrust in the capacities of public management. At bottom, they capitalized on the same circumstances that fueled all the new market thinking of the decade: the paradigmatic collapse at professional economics' center, the vulnerable record of the nation's economic managers and therefore the vulnerable record of governmental policy itself, the narrowing down of institutional society into word-pictures of isolated individuals, the hunger for self-administering economic rules, and the rising stock of simple ideas. Except for the setting into which it erupted, the supply-side case would hardly have gained a hearing in the op-ed pages and the congressional staff debates. In Gilder's purpled prose, Wanniski's "wedge," and the new president's vow to release the wellsprings of faith, work, and investment, the decade's revival of market ideology was yoked to a new optimism and a new constituency.

The frontier did not open up, of course, quite as Gilder imagined it. The linchpin of supply-side economics, the Laffer prediction that the income tax cuts would pay for themselves in a spurt of economic growth, did not

materialize. Squeezed into recession by the Federal Reserve, the economy did not begin its cyclical recovery until 1983—by which point the annual federal deficit, which had once been the *bête noire* of Republican conservatives, had mushroomed to two and a half times its pre–tax cut levels. The unemployment rate did not fall back to its 1970 level until 1997. The cruelest betrayals of the supply-siders' predictions were in the two areas in which they were most confident of change: work effort, which grew only modestly, and domestic savings rates, which, despite the lessening of the federal tax "wedge," fell after 1981.[64]

But politically and ideologically, assumptions had changed. The Democratic party, abandoning its late-1970s hope for full employment legislation, turned to more modest plans for targeted industrial promotion and job retraining, and then, abandoning that, settled finally under Clinton for a program of North American free trade, a favorable investment climate, and tax credits for the working poor.[65] The Republicans, once the party of strictly balanced budgets, abandoned their past in favor of a new tax-cut populism. On the global stage, the promarket policies flowing out of Reagan's United States and Thatcher's Britain were already rippling outward through the agencies of international economic management. At the World Bank, where Robert McNamara had forcefully steered policies toward poverty alleviation and public sector development in the 1970s, his successors in the early 1980s, the banker A. W. Clausen and the chief economist Anne Krueger, were much more alarmed by "government failure" than by market failures. In alliance with neoliberal forces elsewhere, World Bank and International Monetary Fund managers now set lending conditions that routinely included privatization of public enterprises, trade deregulation, reduction of price subsidies, and relaxation of limits on foreign investments.[66]

Accelerated by the U.S. production of foreign graduate-trained economists, the universalistic rational-actor models of the graduate economics seminars diffused across large parts of the world economy. The term "monoeconomics" that Albert Hirschman coined for the phenomenon downplayed the sectors of resistance to the new "Washington consensus." But the notion that the path to growth for developing economies might be distinctly different from the guidelines for fully developed economies (an axiom of the developmental economics that Hirschman had helped elaborate) had all but evaporated. By 1983–1984, when under in-

tense pressure from investors both the Mexican and the French governments abandoned their state-led economic policies, the near global dominance of the new political economy was clear. Faith in the wisdom and efficiency of markets, disdain for big government taxation, spending, and regulation, reverence for a globalized world of flexible labor pools, free trade and free-floating capital: this was now, despite the remaining holdouts, the world's dominant economic ideology.[67]

Markets transmitted economic desires and facilitated the production of wealth; in the newly regnant metaphors of the 1990s they did still more. At the beginning of the era, writing in one of the mid-1970s' most important books of social theory, *The Cultural Contradictions of Capitalism,* Daniel Bell had argued that the enormous productive capacities of markets went hand in hand with their destabilization of the very habits of bourgeois thrift and self-discipline on which capitalism itself depended. In the same vein, Bell's collaborator on *The Public Interest,* Irving Kristol, offered capitalism two cheers, not more, in the mid-1970s. Earlier still, Friedrich von Hayek had worried that the masses were becoming "strangers to the rules of the market," less and less imbued with its discipline and values.[68] By the 1990s, however, the dominant strain emphasized the naturalness and boundless freedom of markets. More efficiently than elections and representative government, they accomplished what theorists had imagined democracy to do. "Markets are voting machines; they function by taking referenda," Citibank's Walter Wriston wrote in 1992; they give "power to the people." Heralding the new global economy, Thomas Friedman wrote that markets had "turned the whole world into a parliamentary system," where "people vote every hour, every day." Unlike deliberative politics, markets were the realm of freedom. Loosed from institutions and power, they silently did their work: optimizing, signaling, making tangible the domain of choice.[69]

This was not the way markets had always been conceived. Varied and imperfect, sites of tradeoffs and compromise, markets had been imagined as indispensible to society, not as a metaphor for society as a whole. But from the temporary collapse of the Phillips curve and the monetarists' relentless exposure of the breakdown in the predictive capacity of Keynesian macroeconomics, to the unanticipated conjunctions of University of Chicago law and economics with the efficiency concerns of an inflationary era; to the rational expectationists' seizure of the implications of

inflationary time and behavior; to the supply-side populists' success in channeling an inflation-fueled tax revolt into a federal income tax cut, a series of conjunctions between ideas, economic circumstances, and patrons had joined to push a newly abstracted and idealized concept of "the market" into the center of social and economic analysis.

Most novel about the new market metaphors was their detachment from history and institutions and from questions of power. As the market grew more abstract, society thinned out into highly reduced microeconomic mental pictures: Gilder's heroically independent entrepreneurs, Lucas's forward-looking utility maximizers, Wanniski's fish and coconut traders, the Coase theorem's rancher and farmer maximizing the public good as they stood on the courthouse steps. To imagine the market now was to imagine a socially detached array of economic actors, free to choose and optimize, unconstrained by power or inequalities, governed not by their common deliberative action but only by the impersonal laws of the market.

The new metaphors of markets and society were a heuristic myth, of course: a model of ideal action. Their "choice-theoretic" model of social relations had occupied a place somewhere toward the back of virtually every introductory university-level economics textbook in the 1970s, in the microeconomic section where abstract models of perfect competition were explicated. But in inducting students into the frame of economic analysis, the real-world complexities of the aggregate, institution-thick, "mixed" state-and-private economy had come first. As late as 1988, publishers resisted proposals to turn the formula around. Four years later, however, there was hardly a textbook publisher, even the publishers of so consciously liberal a textbook as Joseph Stiglitz's *Economics,* that was not scrambling to reverse the frame and put students' introduction to the idea of perfect competition first. The "fallacy of composition" fell out of the introductory economics courses.[70] In a series of elaborations and qualifications of the idea of perfect competition the rest of economic science now unfolded.

Nineteen ninety-two was the year in which the Samuelson textbook, its market share slipping and its once predominant command over the pedagogy of the subject eroded, turned its chapter order inside out and opened with microeconomics. The publishers advertised the "leitmotif" of the new edition as the "rediscovery of the market."[71]