Models and reality
in
economic
discourse

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For more than 35 years, economic theory—the skein of Cambridge (U.K. and U.S.A.) economics woven by Alfred Marshall, John Maynard Keynes, and Paul Samuelson, has been a powerful force directing economic policy. Today, there is general agreement that government economic management and policy is in disarray. Many economists argue that prescriptions derived from previous historical situations no longer apply, but there is little consensus as to new prescriptions. Indeed, there is emerging a prior question about the fundamental postulates of this neoclassical economics—about the model of a competitive equilibrium, and about the guiding assumptions as to how individuals, firms, and governments behave (e.g., utility maximization).

To a Mohammedan, all Christians are alike, whether foot-washing Baptists or word-splitting Thomists, and while the theoretical differences between a Friedman and a Samuelson are distinct, and the

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policy consequences divergent, there is also the question whether the theoretical framework that encompasses both is itself adequate. In short, there is the question not only whether there is a crisis in economic theory but also a crisis of economic theory itself. For this reason, one has to go back to the history of that theory and retrace its steps.

I

From the moral to the instrumental

Modern economic modes of thinking—those of the last 200 years—depart in two wholly novel ways from all previous modes of thinking about the subset of human activities that it labels “economic”—a word that was not established until Alfred Marshall’s *Principles* in 1890; until that time the term used was “political economy.” The first departure was to isolate economics from a traditional context of moral activities, and to establish it as a set of activities that could be judged purely in instrumental terms. The second was to conceive of the world of economic exchanges, analytically, as an autonomous, self-consistent realm, a system of structural relations in which an understanding of economic activities could be derived from the postulates of the system.

There were two intellectual reasons for these developments. Related to the first was the association of economics with modern liberalism and its fundamental tenet that human beings were to be regarded as individuals detached from family, clan, class or nation, as independent, self-determining beings, each the judge of his own actions; a corollary of this tenet was that the rules regulating the relations between individuals were to be procedural, not morally substantive. In this respect, what was true of economics was true of law, religion, and culture as well: Art was to be for art’s sake, not subject to moral norms; law and morality were regarded as independent realms. Morals were regarded as pertaining to individual, private conduct and law to the formal, general rules of public conduct. In economics, each man properly pursued his own self-interest.

All this is barely 200 years old. When Francis Hutcheson, the teacher of Adam Smith, published his *Short Introduction to Moral Philosophy*, his “Principles of Oeconomics and Politics” opened with chapters on marriage and divorce, the duties of parents and children, and masters and servants—a tradition going back to the Greek conception of “oeconomics” as the principles of management of the
household. Adam Smith would write a *Theory of Moral Sentiments* prior to his *Wealth of Nations*, and while some scholars argue that there is an underlying relation between the two, the contents differ in their emphases. In the former, it is on the disinterested judgments of moral actions, in the latter, on the self-interest of individuals.

Subsequently, in its first 75 years, English economic theory developed in a context of utilitarianism which postulated that the happiness of the greatest number was the outcome, if not the object, of independent economic choices. But it was by no means self-evident—as Henry Sidgwick, the great Cambridge moral philosopher, pointed out in his *Ethics*—that Egoism and Utilitarianism were so easily reconcilable (“unless indeed by religion”), or that it was an obvious truth that “the interest of all is the interest of each.” Economics after Marshall, however, moved away from its utilitarian schema and became concerned principally with the egoistic interests of each.

The second, intellectually distinct yet historically related, development was the new idea of economics as a science. But the view of science that was prevalent then was the explication of an underlying structure of constants, of invariant relations beneath the flux of turbulent surfaces, and the formulation of a general set of equations governing the interconnections of those constants. The model is that of classical mechanics. Galileo turned from the study of concrete bodies to their abstract properties, such as mass, acceleration, velocity, and their interrelations within a unified field. In a similar sense, a shift occurred from the political economy of historically-located societies to economics as the abstract study of the interrelated variables that would be applicable to any system of production and exchange. In other words, there began the search for those constants that could be identified as the stable, underlying “reality.”

In short, economics moved from the moral (or political) and normative to the instrumental and scientific; and the great structure of this achievement was the neoclassical edifice of Alfred Marshall and the mathematical formalization of this set of relations in the “general equilibrium” theory of Leon Walras.

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1 One might say that all this was just prescriptive ideology for men did not then, if ever, manage their economic affairs by such rules; the scions of the Renaissance rulers were taught the “education of Christian principles,” not Machiavelli’s handbook. That may be, but it only begs the question as to the reasons for this “ideology,” and why the ideology—if it was that—changed so radically.
Economic Man

The concerns of the classical economists, from Adam Smith to John Stuart Mill, were with wealth and economic growth. The measure of economic welfare was the quantity of output which, in turn, was a function of the quantity of labor and its productivity. For the classical economists, the "real" measure of goods was their "value," not their utility. The reason goes back to the famous "diamond-water paradox," in which Smith had argued that since useful goods such as water are free, and useless goods such as diamonds are expensive, utility could not be a determinant of price. In the short-run, the price of a commodity might be governed by demand, but in the long-run it was determined by the cost of production. In effect, Smith largely passed over the demand problem and stated that "natural prices" are governed by the outlay of producers on the supply side of the market.

For Smith, the science of economics was the mode of augmenting capital stock and increasing the productivity of labor so as to expand the output of goods, and thus wealth. The economy was a "system," but in a metaphorical not mechanical sense. The premise was that it does not pay an individual to produce himself what he could buy more cheaply from someone else, for "what is prudence in the conduct of every private family, can scarce be folly in that of a great Kingdom." If each person took comparative advantage of his own resources, all men, if unimpeached—"the obvious and simple system of natural liberty"—would maximize aggregate wealth.

What Adam Smith lacked, however, was the "nuance" of decision, namely just how an individual would maximize his own contribution. This calibration was supplied by W. Stanley Jevons and others in the "marginalist revolution" that began in the 1870's. As Philip Wicksteed, one of its later expositors wrote:

... by increasing our supply of anything we reduce its marginal significance and lower the price of an extra unit on our scale of preferences; and suitable additions to our supply will bring it down to any value you please. Thus, whatever the price of any commodity that the housewife finds in the market may be, so long as its marginal significance to her is higher than that price, she will buy; but the very act of putting herself in possession of an increased stock reduces its marginal significance and the more she buys the lower [the significance] becomes. The amount that brings it into coincidence with market price is the amount she will buy.

This assumption, that the utility of a good declines as the stock increases, means that the process described by Wicksteed is an
equilibrating one. As the stock of a good changes, the value of additional units change, thus creating a situation where the marginal value is just equal to the price. Thus, while the total utility of water is undoubtedly greater than the total utility of diamonds, the marginal utility of the stones is high because the stock is low, whereas the marginal utility of water is low because the stock is plentiful.

What the marginalists did was to make relative price and relative scarcity the fulcrums of economic analysis. As reformulated by Lionel Robbins, economics became the science of allocating given quantities of scarce resources among competing claims to obtain the most efficient or optimal use. As William Breit and Roger Ransom wrote:

The fact of scarcity creates a necessity for choice and a careful comparing of alternatives. Accordingly a new view of human nature came into focus in the writings of neoclassical economists. The individual is imagined in a constant process of delicately balancing his marginal expenditures and marginal utilities. This rational, calculating human who emerges clearly in the pages of Menger’s *Grundsätze*, also appears in most of the works of neoclassical writers, including Jevons, Pareto and Wicksteed.

What we have here, in short, is an abstraction now made flesh, the idea of “economic man”—a term first introduced by Pareto.

II

A system of equilibrium

The behavioral assumption of what is called neoclassical theory is that of the individual’s utility maximization. The structural context is a theory of markets, the idea that in the criss-crossing of buyers and sellers a rational sorting-out takes place which satisfies all those concerned. And, as Eric Roll has written: “If . . . we regard the economic system as an enormous conglomeration of interdependent markets, the central problem of economic enquiry becomes the explanation of the exchanging process, or, more particularly, the explanation of the formation of price.”

The first neoclassical summation of exchange was formulated by Alfred Marshall. Marshall was able to show, with his ingenious diagrams, how the costs of production on the supply side intersected with marginal utility on the demand side to determine relative price. For Marshall, price theory was what economics was all about. From price theory, he derived the demand curve, the elasticities
of demand and supply, the nature of consumer’s surplus, the use of long-run and short-run analysis, partial equilibrium, and the other components of the “analytical engine” which he fashioned to understand the terms of trade.

With Marshall, too, came the first nuanced analysis of the character of economic equilibrium. The classical framework had been Say’s Law of Markets which, crudely put, stated that “supply creates its own demand.” Inadequate demand as a cause of unemployment was unlikely since human wants were deemed to be insatiable, and supply would generate the demand through the circular flow of payments from suppliers to consumers or investors and back to suppliers. Temporary gluts or shortfalls might always occur, but these would adjust themselves through the movements of wages and prices in each market.

Neoclassical economics, following Marshall, refined Say’s Law by using marginal analysis to determine the level of real output. A producer would never seek to offer a worker a wage greater than the value of the added output his labor could produce, so that the number of workers hired by a firm would be set at the point where cost of the marginal worker would equal the value of his output. And, by the same reasoning, John Bates Clark sought to show in his Distribution of Wealth (1899) that the same principle would apply not only to wages, but to the markets for all the factors of production, to rents and returns on capital (interest and profit) as well. Clark concluded that under perfect competition each factor would receive a return precisely equal to its own contribution, a return equal to the value of the marginal product. In this fashion Clark re-introduced a normative principle of a “just return” to labor and capital as factors in production.

Given these millions of transactions in hundreds of different kinds of markets, where the aggregate of prices in a product market must match the aggregate of prices in a factor market, and where the prices paid out equal the incomes received, how is all this to be accomplished? As Mark Blaug puts it:

... What reason do we have for thinking that the whole process hangs together? Business firms enter product markets as suppliers, but they enter factor markets as buyers; households on the other hand, are buyers in product markets but suppliers in factor markets. Is equilibrium in product markets necessarily consistent with equilibrium in factor markets? Does the market mechanism guarantee convergence on a general equilibrium solution? If so, is this solution unique, or are there several configurations of prices that will satisfy a solution?
Even if a unique general equilibrium exists, will it be stable in the sense that a departure from equilibrium sets up automatic forces that bring the system back into equilibrium?

The first full set of theoretical answers had been given by the French economist Leon Walras, in his *Elements of Pure Economics* (1874): The product prices and factor prices are determined simultaneously, and by solving the simultaneous equations, one can determine the general equilibrium. As Schumpeter declared, Walras' *Elements* is nothing less than the Magna Carta of exact economics.

Yet if there was a general equilibrium, was there some other criterion which would tell us whether the equilibrium was optimal? Walras' system was elaborated by his successor at Lausanne, the Italian engineer-economist Vilfredo Pareto. Pareto provided a more elaborate mathematical presentation of the Walrasian general equilibrium scheme and added an additional criterion which introduced a new normative consideration. As against the notion of the greatest good for the greatest number (which depends upon comparing quantities of unlike things), or seeking to compare interpersonal utilities, Pareto abandoned the idea of a unique social optimum and introduced the idea of compensating payments, or what we call today a "trade-off." Thus a welfare trade-off, or "Pareto-optimality," would be that point when no person would be less well off and at least one person would be better off. The theorem was neglected for many years until resurrected by Abba Lerner in 1934. It is today the foundation of welfare economics.

Seduced by the idea of a general equilibrium for all economic transactions, Pareto sought to generalize the idea to the entire range of social phenomena. Arguing that economics was but one type of human action, namely logical or rational action, Pareto attempted in his *Treatise on General Sociology* to set forth a comprehensive scheme that would embrace non-logical actions as well. He hoped, for example, to show that the "circulation of elites," which he held to be the fundamental character of politics, could be charted with the same accuracy as the circulation of goods.

The rational and the real

Let us leave aside, for the moment, the problem of a unified theory of social actions and restrict ourselves to the economic—the logical and rational—as deriving from self-interest.

The development of neoclassical economics as a positive science raises two epistemological questions. The 19th century view of sci-
eneces, drawing from traditional philosophy, held that beneath the surface of appearance was an underlying structure of reality. Thus, for Marx, beneath the “anarchy” of the market was a structure of social relations; for Freud, below the rationalizations of behavior, the impulses of the unconscious; for Pareto, underneath the intellectual justifications, the residues of sentiments. Neoclassical economics posits its master key as well, the structure of a general equilibrium in markets.

But this raises a second question—which goes to the heart of the character of the social sciences as science—whether the general equilibrium that one can define, in theory, is a fiction, a normative standard, perhaps, against which to judge an actual economy, or a description of how economic exchanges (if unhampered) take place in accordance with the “laws” of economics. Can the theory “model” reality? For the economist, the starting point is the distinction between “real” and “nominal” magnitudes.

The everyday world is one of sharp fluctuations in price, of gluts and shortages, of changing ratios between values, and the like. To measure these, one must have a standard of measure that itself is invariable. Common sense makes a distinction between the listed price of a good or of one’s dollar income and its purchasing power over time, corrected for the changing value of money. For the economist, the first are nominal magnitudes, but underneath are the real relations established in the long-run by the equilibrating forces of relative prices which clear all markets and bring the entire system into balance. The questions that have dominated contemporary economic theory are whether these equilibrating forces do act, in practice, to bring the economy back to the “real”—some would say “natural”—relations.

When Adam Smith in his Wealth of Nations, wrote “Of the Real and Nominal Price of Commodities, or of Their Price in Labour, and Their Price in Money,” he was not seeking to distinguish between purchasing power and the value of money, but to define economic welfare, to see whether an individual was better off or not over time. The contemporary assumption is that such a concept revolves around an increase in real income, in the standard of living defined as to the things we can buy. For Smith, however, the improvement in welfare was identified with the reduction of the “toil and trouble” involved in irksome labor. It was for this reason that when Smith corrected nominal (money) values he did it, not in relation to the changes in price level, but in relation to money wage rates.
Adam Smith was a believer in the free market, but not for the reasons of modern positivist economics. For Smith, the effect of the market, its higgling and bargaining, was to iron out or equalize the disutilities of work by the "trade-off" of wages, but the virtue of the market was not its presumed mechanism of allocative efficiency. It was rather that, by comparative advantage, specialization, and the division of labor, it would extend the scope and scale of economizing (i.e., productivity) and thus increase the wealth and welfare of mankind. For Adam Smith, the prod of self-interest was not such that it would create a "natural harmony" of society (he was too much of a Scot ever to accept that pap) but that it would reduce irksome toil through the phenomenon of economic growth.2

Alfred Marshall was quite aware—as Talcott Parsons pointed out almost 45 years ago in his Structure of Social Action—of the diverse motivations and wants of man and, as a good Victorian of probity and responsibility, he wanted to foster improvement in the human lot. But as a child of his time, Marshall wanted also to advance economic science, which he defined as the discovery and measurement of regularities in behavior. And, while man often acts irrationally in many spheres, actions in economic life are more easily plotted because they are constrained by cost calculations, reinforced by a psychological hedonism (e.g., diminishing utility), and are measurable in prices. Thus, for Marshall—as distinct from Smith (or Marx)—the scope of economic analysis became coterminous with price theory.

With Walras the move from determinacy of price in one market to equilibria in all markets rounded out the boundaries of the system. Walras' solution was the picturesque theory of tâtonnement (literally "tapping") in which buyers and sellers grope along until a set of equilibrating prices (which match the "underlying" set

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2For Smith, as is clear in the book on moral sentiments, it is not economic motivation that prompts a man to work, but status, respect, esteem, moral mettle, qualities which would allow him to be a man of worth and dignity. Smith believed man to be a socius whose actions are taken always with an eye to the judgment of his fellows. His theory of society is a theory of sympathy, not as Hume thought of pleasure in a system of utility, but as a measure for gentlemanly conduct in social relations. The primary virtue is justice and, as he wrote in The Theory of Moral Sentiments, "we feel ourselves to be under a stricter obligation to act according to justice than agreeably to friendship, charity or generosity; that the practice of these last-mentioned virtues seems to be left to some measure to our own choice, but that, somehow or other, we feel ourselves to be in a peculiar manner tied, bound, and obliged to the observation of justice."

In this respect, Smith was still a pupil of Francis Hutcheson and a practitioner of Aristotle's oeconomies.
of “real” prices as established in the equations) are reached. Walras made two assumptions: one of perfect competition in all markets; the other, an absence of advances in technical knowledge, since these would change the parameters of the equations. That theory is completely static. But within its premises, what economists could now do was to define precise functional relations between quantifiable variables and to construct geometric, and later algebraic, models of economic behavior.

Since Walras, general equilibrium theory has been polished and perfected in its mathematical elegance by writers such as Arrow, Debreu, and Hahn. When put together with the neoclassical reformulations of Hicks and Samuelson, we have a general system of theory to explain the relative prices of goods and services and of the factors of production, the allocation of these factors to various uses, the levels of employment, and the level of prices. More precisely, economics developed two general systems of theory, one for relative prices and allocations (microeconomics), the other for levels of employment and price (macroeconomics). It was this rigor, as Keynes wrote in a memoir of Marshall, that led to “a whole Copernican system by which all the elements of the economic universe are kept in their places by mutual counterpoise and interaction.”

**A confusion of realms**

In the history of economic theory, these developments are looked upon as advances in scientific knowledge and technical sophistication (especially when mathematics is employed), and as a mark of cumulative growth. But what is almost completely ignored—yet the consequences are crucial if theory is to be directive of policy—is that these “paradigms” (I use the word to mark off distinctive modes of defining reality) each make different assumptions about their subject matter. The words “nature,” “natural rates,” “economic laws,” “economic science,” occur in almost all these schemata, yet the assumptions vary so radically as to alert one to the fact that four different philosophical and epistemological modes are present, and have become confused with one another.

When Adam Smith is using the word *nature*, his idiom and context are classical (i.e., ancient) philosophy. Nature implies a *telos*, a purpose immanent in the form of the object, which is the task of men to realize. Natural liberty is not the state of nature of Hobbes, a mechanistic world driven by appetite, murderous self-inter-
est, and aggrandizement. It is a world—otherwise The Theory of Moral Sentiments makes no sense—where men strive for disinterested moral judgments (what Aristotle called phronimos) by seeking for those general standards that comprise "sympathy." The Smithian world is individualistic (because conscience rescues a man from the bonds of conformity) but not egoistic. There is, in the phrase coined by him, "the Great Society." Economics, as an aspect of it, is inextricably normative and moral.

With Marshall, the moral impulses are also evident. His Principles are shot through with concerns to improve the well-being of men. He proposes, even, a measure of welfare, the "consumer's surplus," or the difference between what a consumer actually pays for a product, as against what he would have been willing to pay, and this becomes an index of well-being over time.

But with Marshall, morals and money are sundered. Since science is "inductive," economics must limit its scope to phenomena that have a price measurement. And economic laws are those generalizations—regularities—about human behavior which could be measured in terms of money, as men moved about "the ordinary business of life," seeking the best advantages for themselves. Given the scaling of utilities that Marshall now thought possible, regularities of behavior could be observed and measured, and predictions made about future events.\(^3\)

Economics, then, deals with the maximization of utilities, and the different ordering scales whereby individuals rank their wants. Utility, thus, becomes equated with welfare. But such a conception begs four questions: 1) that the distinction between "needs" and "wants"—needs which are common to all men, wants that are idiosyncratic and psychological—can be erased and all demands treated as wants; 2) that the social welfare is defined only in terms of the welfare of individuals; 3) that every individual is the best judge of his own welfare; and 4) that the welfare of individuals may not

\(^*\) Quite remarkably, in fact, Marshall sought to convert all phenomena to utilities, from qualities to quantities, so to speak. As he writes on "Utility and Demand" in his Principles:

Men cannot create material things. In the mental and moral world indeed we may produce new ideas; but when he is said to produce material things, he really only produces utilities; or, in other words, his efforts and sacrifices result in changing the form or arrangement of matter to adapt it better for the satisfaction of wants.

Utility is taken to be correlative to Desire or Want. . . . There is an endless variety of wants, but there is a limit to each separate want. This familiar tendency of human nature may be stated in the law of satiable wants or of diminishing utility. . . .
be compared. Yet, if money and morals are sundered, it does not therefore follow that traditional moral questions can be set aside.

Walras' idea of *tâtonnement*, of the groping of individuals in response to signals from an external environment is, unconsciously but perfectly, an image of the Darwinian world. Here society is like nature, in which adaptation is the natural process by which selection takes place. No single group of persons can control the entire process, for the number of wants and desires are so diverse that no one can plan to match these consciously, as through some giant switchboard or computer.

The sociological and philosophical framework for this image of *tâtonnement* was proved by the Austrian economist Karl Menger, one of the multiple discoverers of marginal utility with Jevons, and a founder of the so-called "Austrian economics." For Menger, society is an evolutionary system in which "spontaneous order" arises out of the mutual adaptation of individuals, and the whole is functionally integrated by natural processes, exactly similar to biological processes. Human calculation simply cannot anticipate and provide for the diversity which is the characteristic, and the strength, of creative natural forces, so that planning is inherently restrictive and self-defeating, limiting the ability of individuals to make their own adaptive responses.

In contemporary thought, the argument has been expanded most vigorously by Friedrich Hayek, who claims that not only is there no such thing as "social" justice outside of individual desert, but that individual liberty is the necessary condition for individuals to respond to the unforeseeable and unpredictable onset of multifarious events, if a society is to maintain that capacity for spontaneous adaptation which would keep a social order viable. Economics, for Hayek, while integral to freedom, has little relation to virtue. It is a view almost diametrical to those of the ancient philosophers.

The "general equilibrium" model, as perfected by Arrow, Debreu, Koopmans, et al., is a jewelled set of movements, a celestial clockwork, to use the old image of Laplace, in which perfect competition and optimal allocations operate as an Invisible Hand, except that the Invisible Hand is neither God, the principle of benevolence, nor the spontaneous adaptation of Nature, but a Mathematical Theorem, a set of "coefficients of transformations" sublimely indifferent—as Barone earlier, and Lange and Lerner later pointed out—to the private ownership of the means of production or a decentralized price system of market socialism. It is a work of art, so compelling that one thinks of the celebrated pictures of Apelles who painted
a cluster of grapes so realistic that the birds would come and pick at them. But is the model "real"?

Walras had thought of his model as actually describing how competitive markets would come into equilibrium. He thought that the trading prices in actual markets would be the same, eventually, as those which would solve the system of simultaneous equations. Yet the problem of disequilibrium in different kinds of markets—such as labor markets—is too obviously a real-world problem. The conclusion is inescapable. There is no empirical guarantee that the blind "groping" of the market produces a set of "clearing prices" that are identical with the underlying set of equations. If the model, as elaborated by Arrow, et al., has validity, it is only as a "fiction"—logical, elegant, self-contained, but a fiction nonetheless.

III

Four bridges to reality

The luster of neoclassical theory in the last 35 years obscures the fact that in the first three decades of this century, especially in the U.S., it had fallen to a low state of esteem. It was regarded as "academic" (in the pejorative sense of the word), as "theoretical" (again pejorative), abstract, ahistorical, hypothetical-deductive, etc. The new hope was for institutional economics, as exemplified by John R. Commons, who drew on historical and sociological concepts, or "evolutionary economics," as illustrated by Thorstein Veblen, who drew upon anthropology for his usages regarding habit, custom, emulation and the like. What gave new life to neoclassical theory was two developments. One was the initiation of statistical studies, such as those of Wesley Clair Mitchell and such subsequent students at Columbia as Arthur F. Burns, Simon Kuznets, and Milton Friedman. These sought to look at actual economic behavior and to construct various indices—the formation of index numbers itself was a major achievement—chart magnitudes over time, as business cycles, and create systems of national accounts. Yet many of these are atheoretical: the system of national accounts, for example, patient and ingenious as is the construction, which is "simply" the construction of structural identities of output and income. But the statistics were to provide the coefficients for the theoretical variables.  

*The history of statistical theory—the work of R.A. Fisher, Neyman and Pearson, Yule and Kendall, Wald and Hotelling—is curiously neglected, in fact often omitted, in standard histories of economic theory.
The second were a number of "bridges" from theory to actuality. Competitive equilibrium was the theoretical fiction of neoclassical economics, but empirical men had to find ways of relating the abstract image to the buzzing confusions of the everyday, workaday world. In relation to the debates on the viability of neoclassical theory, I wish to single out and discuss four such bridges.

1) The quantity theory of money. Wealth, we assume, is land, machinery, goods. But is money also wealth? For traditionalist Catholic writers, as for the young Marx, money was a stealthy means of expropriating productive labor or the use-values it creates. For John Law, the paper-money mercantilist of 1705, as for the later American populists, "money stimulates trade," and cheap money is the road to prosperity.

The quantity theory of money, from John Locke down to Milton Friedman, is an effort to correct both these views by arguing that money can only reflect, or distort, real relationships. Writing in the 1690's, Locke stated that prices vary in definite proportion to the quantity of money, and that the abundance of money makes everything dear; and Hume a half century later sought to demonstrate a causal relationship between money and prices. As Milton Friedman has written:

There is perhaps no other empirical relation in economics that has been observed to recur so uniformly under so wide a variety of circumstances as the relation between substantial changes over short periods in the stock of money and prices; the one is invariably linked with the other and is in the same direction; this uniformity is, I suspect, of the same order as many of the uniformities that form the basis of the physical sciences.

The framework of the argument is simple. The price level itself—the general price level—is a ceiling determined by the quantity of money in circulation. The prices for individual commodities (i.e., relative prices) might fluctuate for natural or exogenous reasons (such as droughts for food prices or cartels for oil). But so long as the total quantity of money was steady, the general price level could not rise, though individual prices would adjust to each other as demand shifted. Thus, having to spend more for fuel oil would force one to cut spending for other products. For the same reason, Friedman believed that trade unions could not force up the general level of wages (so that "wage-push inflation" was an impossibility), so long as the total money supply was constant. Unions could only affect the "relative shares" of wages among industries, or between capital or labor—but not the general price level.
This neoclassicist view, of course, made a fundamental distinction between the real value of money and its nominal value. The real value expresses the tangibles money can command; the nominal, the existing amount expressed in a monetary unit. (To be a millionaire may not mean much if it costs a million marks to buy a cup of coffee, as in Germany in the 1920's.) Quantity theorists said that people act to maintain some level of real balances (i.e., real purchasing power). If the relation between the nominal and real balances moved out of line, people would seek to adjust their nominal money balances to equal the customary or desired level of real balances.

The neoclassical economists understood that there were often sharp price fluctuations in the real world, and that purely monetary or nominal events, such as a big gold strike, let alone a war financed by printing press money, could have real effects in the short run. But they believed that such economic fluctuations were transient, or that monetary distortions after a while would leach away, since underneath these "top of the wave" turbulences was the "real economy" of capital equipment and labor. The logic of market-oriented equilibrium economics was thus, if perturbations occurred, to let them run their course, since adjustments (even if at times painful ones) would, in the long run, wring out the nominal excesses.

In neoclassical theory, a cut in money wages was the same as a cut in real wages, if prices were flexible. If a money wage was too high, competitive pressure would drive that wage down to the price where the employer would be able to hire again. If money wages were "sticky," an employer would not hire workers so that, under those conditions, unemployment would be the "partial equilibrium" (i.e., the trade-off), but the general price level would fall.

The picture for wage and product markets was rounded out for capital markets by the Swedish economist Knut Wicksell who sought to show how the quantity of money—and credit— influenced interest rates which, in turn, influenced the flow of savings into investment. In Wicksell's scheme, the interest rate became the equilibrating instrument for the supply of, and demand for, capital.

In short, there was macroeconomics before Keynes, because the neoclassical quantity theory of money was, in fact, what we now call macroeconomics.

2) The theory of monopolistic competition. Neoclassical economics recognized only two market structures—competition and monopoly—as ideal types. If markets are interdependent, entry of firms
easy, and substitution of products possible, then the pressures to keep each firm producing at its most efficient level would be the result. Clearly, however, this did not reflect the actualities of the business world. The man who coped with this fact was Edward H. Chamberlin of Harvard, who first approached the question in his Ph.D. thesis in 1927, and published the results in 1933.

The phrase, "monopolistic competition," is an oxymoron. The idea is simple, though the ramifications for neoclassical theory complex. Chamberlin focussed on a firm's control of a product rather than price. What he called into question were the postulates of homogeneous products and interdependent markets that underlay the theorem of competitive equilibrium. His work opened the way to a new theory of the firm and of industrial organization. It questioned the assumptions of price theory, which is the core of Marshall's conception of economics. He opened the way to a revolution in microeconomics in the way that one speaks of a Keynesian revolution in macroeconomics.

Marshall had described the price behavior of commodities within an industry. But he had not really looked at the behavior of an individual firm, or identified a commodity in other than a generic way (e.g., "textiles" or "tobacco"). But a firm which can establish product differentiation, by "branding" its product, gains a quasi-monopolistic advantage over its competitor and thus creates a special market enclave. Given branded products, consumers do not behave as if all similar products are alike.

By treating a product as relatively unique, Chamberlin showed that a firm could—with the help of advertising—affect the demand curve and establish "market power." Other firms in the same "industry" might compete, but the competition would be less on price than on their own product identification.

For economic theory, Chamberlin's demonstrations of a firm's behavior in price and cost diagrams were revealing. Given the new kind of competition, each firm produces less than under conditions of perfect competition. Price does not equal marginal cost, and price and output are sloped along monopolist lines. Yet because of product competition, profits are lower than they would be under a monopoly. Not only is Adam Smith's market hand invisible; it is just not there. From the view of social beneficence and consumer optimality, there is only a wasteland: Monopolistic competition provides the disadvantages of monopoly (i.e., higher prices than at a price-competitive level) and none of the benefits of competition (since entry into the market, which requires a new brand identifi-
cation, is not easy). These conclusions of Chamberlin, 50 years ago, are the basis for the more popular Galbraithian critiques of capitalist market practices.

Chamberlin, however, had more than complicated the neoclassical view of competition. He had called into question some of the easy assumptions about price signals as the “switching mechanisms” between products and industries, and, by questioning the interdependence of markets, he was implicitly calling into question the assertion that a “general solution” or multi-market equilibrium was possible. While the “realism” of Chamberlin’s description of product markets rather than price markets was quickly established, the more unsettling implications of Chamberlin’s arguments, coming as they did in the midst of the Depression, were put aside because of the macroeconomic problems posed by world-wide depression, unemployment, and social unrest.

3) The Keynesian Revolution. For a work so widely hailed, yet so rarely read, Keynes’ General Theory is a bewildering book. A technical discussion of the marginal efficiency of capital is followed by a self-contained chapter on speculation, comparing the stock market to a game of “snap, of Old Maid and Musical Chairs.” As Paul Samuelson wrote in a retrospective essay in 1946:

It is a badly written book, poorly organized; any layman who, beguiled by the author’s previous reputation, bought the book was cheated of his five shillings. . . . It abounds in mares’ nests of confusions. . . . In it the Keynesian system stands out indistinctly, as if the author were hardly aware of its existence or cognizant of its properties. . . . Flashes of insight and intuition intersperse tedious algebra. An awkward definition suddenly gives way to an unforgettable cadenza. . . . I think I am giving away no secrets when I solemnly aver—upon the basis of vivid personal recollection—that no one else in Cambridge, Massachusetts, really knew what it was all about for some twelve to eighteen months after its publication. Indeed, until the ap-

*Some of Chamberlin’s work was obscured by the appearance in the same year of Joan Robinson’s Economics of Imperfect Competition. While the title of Mrs. Robinson’s book caught the “gist” of Chamberlin’s argument (though not its technical demonstration of a firm’s quasi-monopolistic advantage), the two books actually dealt with different problems, and the conflation of the two fuzzed the impact of Chamberlin’s argument. Mrs. Robinson’s book was a refinement of Marshall’s idea of monopoly, using an industry as the analytical unit, and did not, as Chamberlin did, deal with market power of firms. As Mark Blaug writes: “Despite superficial similarities between the two books, it is now perfectly obvious that Chamberlin was the true revolutionary.”

The sociological irony is that Chamberlin himself was politically conservative, and on labor quite reactionary, while Mrs. Robinson is the quintessential blue-stocking radical. The most vigorous criticism of Chamberlin has come from the Chicago school, most notably George Stigler, in Five Lectures on Economic Problems and Milton Friedman in Essays on Positive Economics.
PEARANCE of the mathematical models of Meade, Lange, Hicks and Harrod, there is reason to believe that Keynes himself did not truly understand his own analysis.6

Though Keynes is popularly known for the ideas of deficit financing and "pump priming," these were not the concerns of the General Theory.7 The General Theory of Employment, Interest and Money—to give the book its full title—was an onslaught on Say's Law, the argument that in the long-run the "real forces" of the economic system would tend to full employment equilibrium. Thus Keynes' remark that, in the long-run, we are all dead.

Keynes made two arguments: One, highly technical, that even if Say's Law was valid in a static (i.e., self-contained) model, it could not show that a full-employment equilibrium was dynamically attainable since the process of moving toward an equilibrium through time displaces the equilibrium itself.

The second, which received the most attention, was that, in a depression, a static equilibrium was impossible for three reasons: the inelasticity (i.e., unresponsiveness) of interest rates as a means of stimulating investment; a "liquidity trap," or the desire of savers (financial institutions or individuals) to hold ("hoard") money; and the stickiness of money wages and prices. What Keynes was saying was that nominal magnitudes, such as wage rates or interest rates, would not function as price signals, so that "real wages" and "real interest" rates could not come back into balance. With the price levels relatively rigid, nominal magnitudes have a full effect on real quantities. Keynes was seeking to recast economics—away from the quantity theory of money, to an emphasis on income and levels of employment as the determinants of equilibrium, and (the theme is so largely neglected in the popular image of Keynes) on the centrality of investment as the fulcrum of economic policy.

The technical demonstration of Keynes' argument was worked out by Sir John Hicks—the "IS" and "LM" curves (i.e., investment-savings and demand for money) which now appear in all the textbooks, and which show the various equilibria at which different rates of interest, and different demand schedules for money, intersect to achieve different levels of investment.

6 Yet Samuelson, the ironist, concludes: "When finally mastered, its analysis is found to be obvious and at the same time new. In short, it is a work of genius."

7 They had been prescriptions proposed by Keynes in a paper with Hubert Henderson in 1929. But in and of themselves, they were not new: A. C. Pigou, Keynes' predecessor at Cambridge, had put forth a rationale for public works in 1912.
In neoclassical theory, the rate of interest was a real, not a monetary phenomenon, determined by the demand for capital (at its marginal productivity) and the degree of savings in the community. But for Keynes, the two decisions are independent: The volume of savings is a function of the levels of income, and the degree of investment a function of the rate of interest. In a severe depression, monetary policy is ineffective because of the “liquidity trap” whereby lenders prefer to “hoard” their cash, and, unless the government becomes the leading lender, easy money in and of itself provides little inducement for investment.

The third element in this tripod is wage rates. Keynes assumed that wages are sticky because workers are mesmerized by a “money illusion.” They bargain for and react to changes in money wages, because they see only their immediate wage packet and have no means of knowing whether “real wages” (which would have resulted from a fall in product prices) would keep pace with the fall in money wages. Thus, the labor supply responds to nominal wages and becomes inelastic. Since wages have become sticky, when business is bad employers lay off workers rather than cut their wages, and aggregate demand falls.

What follows? In the United States, the quick championing of Keynes by Alvin Hansen led to an emphasis on “compensatory finance” in which government intervention, through tax policy or government spending to raise aggregate demand, became the key policy prescription. In England, the expository essay by J. R. Hicks (in 1937) stressed that the unemployment equilibrium was due largely to the disjunctions in the capital markets and in the money markets: The liquidity-preference schedule was seen as too interest-elastic, and the investment schedule was believed to be too interest-inelastic, for the interest rate to function effectively to generate investment.

The paradox is that in the Hansen version, Keynes was regarded as a radical, the champion of the necessary role of government as a permanent arbiter of the economy. In the Hicks version, the Keynesian and neoclassical views of aggregate economic behavior were assimilated into a unified economic model which re-established the idea of equilibria as the fulcrum of economic theory.8

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8It is this “Americanization” (one can call it even vulgarization) of Keynes that had led to the persistent misconception that Keynes was a theorist only of demand, not of investment. Thus, in a recent issue of Business Week on “The Reindustrialization of America,” the editors begin, in the section on erosion of savings: “Ever since World War II, policymakers under the influence of John Maynard Keynes have focused on demand management. The idea was
A concentration on the technical elements of Keynes' theories necessarily slights the larger, historical revolution which Keynes introduced. As against the Marshallian tradition, Keynes made macroeconomic analysis the center of economic theory. As against the conventional concentration on individual decisions of firms and households, Keynes placed in the center of analysis the interrelation of aggregates such as investment and wages. And from the quantity theory emphasis on the money and price level, he shifted the focus to output, income, and employment, as these are coordinated in the markets for commodities, capital, and labor, as the fulcrum of concern.

What remains problematic—and it is the crux of the issue—is the question of equilibrium. Keynes was clear that no automatic adjustment of "real" economic forces toward the full utilization of productive resources was a realistic possibility in a modern differentiated society. But was disequilibria, and with it a long-run tendency to secular stagnation, an endemic problem?

When Hicks wrote his reconciliation of Keynes with neoclassical theory—still the fons et origo of the standard interpretation, as Mark Blaug put it—Keynes wrote on his personal copy of that essay that he had "next to nothing to say by way of criticism." Yet a year after the publication of the General Theory, Keynes wrote an article in the Quarterly Journal of Economics, a reply to four critiques by Taussig, Leontief, Robertson, and Viner in which he attributed the chronic cause for the underemployment of resources, and the inherent disequilibria in the economic system, to the inherent uncertainty of knowledge, the inability to know the consequences of our actions, the impossibility of making forecasts, or knowing, therefore, what capital returns or discount rates of capital might be. "About these matters," Keynes wrote, "there is no scientific basis on which to form any calculable probability whatever. We simply do not know."

Marshall had assumed that through rational action and the law of large numbers, wherein individual variations are cancelled out, prediction was the great achievement of economic science. Yet if, as Keynes believed, economic behavior is ruled by uncertainty and indeterminacy, we are all adrift in the open sea.

4) The Phillips curve. It may seem strange to group the Phillips to spur consumer spending at the expense of saving to create the huge markets that in turn would generate investment."

But this is to distort Keynes—and his economic prescriptions—since the crucial argument of Keynes was that investment was the key to the reinvigoration of the economy, since its multiplier effects would expand demand.
curve—which began its life as a prosaic statistical relation between wage rates and employment in the United Kingdom from 1862 to 1957, first noted by a New Zealand economist, A. W. Phillips, at the London School of Economics—with such grand concepts as the quantity theory of money, or monopolistic competition, or the Keynesian Revolution, as one of the bridges from the rarefied purplieus of abstract theory to the messy marketplace of haggling and higgling. But the Phillips curve did seem to show a way of threading a course between the maze of persisting (and even rising) rates of unemployment and a rising price level, a situation that to all economists, neoclassical monetarists and neoclassical Keynesians alike, was a logical paradox in theory and a disturbing actuality in the real world. And it did so by positing the validity of nominal magnitudes, a concept dear to the heart of Keynesians. It is little wonder that Paul Samuelson (at a symposium of the American Enterprise Institute in 1967) declared that the Phillips curve is “one of the most important concepts of our times.”

Keynes and his immediate successors were not primarily concerned with the theory of inflation. They thought that with unemployment and underutilized capacity, as in a depression, price levels were sticky so that nominal magnitudes then had substantial effects on real quantities. But once full employment and full capacity were reached, the relations between nominal magnitudes and real quantities would diverge, and a rise in nominal expenditures (wage rates or prices) would produce demand-pull inflation, a task for the monetary authorities to control by compressing the nominal levels back to the “real” price levels.

The “missing equation” in this picture was the famous Phillips curve which, as Robert Solow has wryly observed, provided after the publication of the article in 1958 more employment (in this case, for economists) than any public-works enterprise since the construction of the Erie Canal. As Solow has described its import:

Notice that [Phillips] was comparing the rate of changes of wages, a nominal quantity, with the percentage of the labor force out of work, a real quantity. If there were no long-run connection between real events and nominal events there ought to be no relation between those two time series. If the crude dichotomy in the Keynesian picture were a good description of the world, then the rate of wage inflation ought to be near zero for anything but full employment. And in times of full employment, if there were any to be observed, there ought to be substantial inflation.

What Phillips found was really pretty astonishing. The simple bivariate relation, relating only one real and one nominal variable, held
up very well over a very long time during which the nature of British industry and labor changed drastically. Here was evidence for a strong, and apparently reliable, relation between the nominal world and the real world. It did not appear to be a short-run transient affair, as the mainstream macroeconomics of the 19th and early 20th centuries would have suggested. It seemed not to be a simple dichotomy between less-than-full employment and full employment, as the casual picture of the early 1950's might have suggested. It seemed to say quite clearly that the rate of wage inflation—and probably, therefore, the rate of price inflation—was a smooth function of the tightness of the aggregate economy.

Phillips' study had been a "straight" empirical one. But the theoretical implications for public policy and Keynesian economics were worked out in 1960 by Paul Samuelson and Robert M. Solow. The two M.I.T. economists assembled an analogous time series for the United States, and from it they posited a hypothetical relation between the rate of inflation and the unemployment rate. "This shows the menu of choice between different levels of unemployment and price stability as roughly estimated from the last twenty-five years of American data," they wrote.

The relation known as the Phillips curve, and its generalization by Richard Lipsey, won immediate and widespread acceptance in American economic thinking. It served, as Franco Modigliani of M.I.T. has put it, "to dispose of the rather sterile 'cost-push/demand-pull' controversy. It also managed to reinforce the idea that one could now 'manage' the economy even more decisively because of the 'menu of choice.'" On the theoretical level, it could even be squared with aspects of monetary theory. As Modigliani put it in his 1976 presidential address to the American Economics Association:

Acceptance of Phillips curve relation implied some significant changes in the Keynesian framework which partly escaped notice until the subsequent monetarists' attacks. Since the rate of change of wages decreased smoothly with the rate of unemployment, there was no longer a unique Full Employment but rather a whole family of possible equilibrium rates, each associated with a different rate of inflation (and requiring, presumably, a different long-run growth of money). It also impaired the notion of a stable underemployment equilibrium. A fall in demand could still cause an initial rise in unemployment but this rise, by reducing the growth of wages, would

* As Solow recalls the discovery: "I remember that Paul Samuelson asked me when we were looking at the diagrams for the first time, 'Does that look like a reversible relation to you?' What he meant was, 'Do you really think the economy can move back and forth along a curve like that?' And I answered, 'Yeah, I'm inclined to believe it,' and Paul said, 'Me too.'"
eventually raise the real money supply, tending to return unemployment to the equilibrium rate consistent with the given long-run growth of money.

But at the practical level it did not lessen the case for counteracting lasting demand disturbances through stabilization policies rather than by relying on the slow processes of wage adjustment to do the job, at the cost of protracted unemployment and instability of prices. Indeed the realm of stabilization policies appeared to expand in the sense that the stabilization authority had the power of choosing the unemployment rate around which employment was to be stabilized, though it then had to accept the associated inflation.

Most of the discussions of the Phillips curve, however, have obscured two very different kinds of issues. One is a movement along the Phillips curve, which posits a “trade-off” between a specific percentage increase in the rate of inflation in exchange for a specific percentage decrease in unemployment (and vice versa). The other is a shift in the slope of the curve itself, in which the relation is more nearly “vertical,” so that one could have a rise in employment without inflation, or a drop in inflation without cutting jobs.

The experiences of the late 1960’s and early 1970’s (one can take President Johnson’s Committee on Price Stability in 1967 for illustration) showed that macroeconomic policies could move us along the curve, but it could not shift the curve.10 The one feeble effort to shift the curve lay in the adoption of wage and price “guidelines” in order to mitigate the price movements. And, to the increasing dismay of economists, in the last few years, the Phillips curves seemed to have gone flat, so that even the menu of choices, the trade-offs up and down along the curve, seems to be vanishing.

Again, as Solow reported:

We know that in the inflation of the 1970’s each of the Phillips curves in the family is relatively flat; you have to accept a lot of unemployment to push the economy down any one of those curves.

Most of the serious estimates suggest that an extra 1 percent of unemployment maintained for one year would reduce the rate of inflation by something between 0.16 and 0.5 percent. That trade-off is not very favorable. We also know that the inflationary process involves a great deal of inertia; that is, it takes a long time for the economy to pass from one member of Phillips curves to a lower one.

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10 The explanation given is the old sticking point of wage rigidities. Samuelson still believes that individuals are ruled by a “money illusion,” so that market responses are made to the fluctuations in the money (i.e., nominal) values of income and prices, rather than real values.
at least under normal circumstances. For instance, an extra 1 percent of unemployment maintained for three years would reduce the inflation rate by something between 0.5 and 1.75 percent. (An extra point of unemployment for three years costs the economy about $180 billion of production, which makes this a very expensive way to reduce the inflation rate.)

We know those two things, albeit in a tentative and gingerly way. What we don't know . . . is why the inertia is so great, why those Phillips curves are so flat. That is, we do not know what bits of our social and economic structure would have to be changed in order to change those relationships.

IV
Impasse

The "golden age" of economics, from 1947 to 1973, arose from the confluence of empiricism and theory. On the one hand was the towering work of Simon Kuznets who constructed the macro-economic identities of national income and national output, and the aggregation of their magnitudes, into a system of national accounts. On the other was the synthesis of Keynesian and neoclassical economics into a formal mathematical model and a set of policy tools to manage the economy. The combination of the two produced a new growth industry of econometrics, and a spate of forecasting models to chart the movement of economic activities and predict the direction and magnitude of their interactions.\footnote{The Brookings model of 1965 had 18 major components, such as labor force, consumer demand, residential construction, etc., in 36 producing sectors and made its forecasts through the use of 300 equations. Project Link, which Lawrence Klein, one of the founders of the Brookings models, has constructed to forecast the world economy, has 1,178 simultaneous non-linear equations in the set of 12 national models, plus several hundred equations to cover trading relationships in the rest of the world.}

But there are two fundamental problems—one might even say fallacies—in the utilization of economic models to understand the ups-and-downs of economic activities. One is that economic theory, \textit{pace} Marshall, is not a generalization about human behavior but, following Pareto, derives from an "ideal type" of one kind of action, so-called "logical actions." And these may well be a minority of economically significant actions.

The other is that an economic \textit{system} is not an economy; it is an analytical abstraction, an ideal, closed world where resources flow freely in response to price, where comparative advantage dictates a shift of resource utilization, where labor is not people but units of skill (or lacks thereof), where there are no political
boundaries, and where machinery, capital, and commodities dis-
tribute themselves to the maximum benefit of "mankind." It is a
utopia, a utopia imagined by John Locke and Adam Smith, and
even by the Manchester liberals such as Richard Cobden and John
Bright who thought that the rational advantages of productivity
and free trade would make war and exploitation—indeed, even po-
itical boundaries—only a memory of the dark past of mankind.12

In short, economic theory is a convenient fiction, an "as if,
against which to measure the habitual, irrational, logical, egoistic,
self-interested, bigoted, altruistic actions of individuals, firms, or
governments—but it is not a model of reality. But even as a fic-
tional ideal, it is inherently problematical.

Modern economic theory is based upon two specific assumptions
about human behavior and its social setting. One is the idea of
"utility maximization" as the motivational foundation for action,
the other is a theory of markets as the structural location where
transactions take place. The assumptions converge in the thesis
that individuals and firms seek to maximize their utilities (pre-
ferences, wants) in different markets, at the best price, and that this
is the engine that drives all behavior and exchange. It is the foun-
dation for the idea of the comprehensive equilibrium. The "re-
form" of neoclassical theory has to begin with these two postulates
of utility and markets.

The maximization of utility

Paul Samuelson has noted that many economists would "sep-
arate economics from sociology on the basis of rational or irra-
tional behavior, where these terms are defined in the penumbra
of utility theory." Utility is identified as egoism, or self-interest,
and rationality is defined as consistency—that is, that preferences
are transitive (if x is preferred to y and y to z, then we would
have to assume, in predicting behavior, that x would be preferred
to z).

Yet the crucial question is whether the obverse of the rational
is the irrational rather than the non-rational, and whether or not
non-rational motivations can provide a valid assumption for an

12 In a very real sense, this utopia of John Locke and Adam Smith is a rival
to the utopia of Marx, and Marx understood this quite well, especially in
those pages of The Poverty of Philosophy where he defined the classical econ-
omists as the "theoreticians" of the bourgeoisie, just as the "intellectuals" were
to be the theoreticians of socialism. The one was a utopia of individualism,
the other of collectivism.
understanding of economic behavior—i.e., the behavior which seeks to enhance the wealth and welfare of mankind. As Amartya Sen, who has raised the question in an acute form, has written:

The primary concern . . . is not with the relation of postulated models to the real economic world, but with the accuracy of answers to well-defined questions posed with pre-selected assumptions which severely constrain the nature of the models that can be admitted into the analysis.

As against egoism, for example, Sen proposes the idea of "commitment," which would require the reformation of welfare economics models, particularly in the areas of "public goods." On the basis of "egoism theory" people are expected to try to avoid their share of costs on the expectation that if it is a public benefit, it would in any case be extended to all. Such a theory proceeds from a theorem of Bentham that the "community is a fiction," and that, in effect, there is no such thing as a "social" point of view apart from one's own self-interest. Yet the radical individualism that underlies this assumption, and that has shaped the models of economic behavior, flies in the face of the large variety of traditional and ideological attachments which often do shape an individual's action into collective form.13

It is also assumed that not only individuals but firms are "utility maximizers." In fact, it was often assumed that, while individuals, responding to habit, custom, or to impulse, may be "irrational," the firm, subject to the discipline of the "bottom line," acts

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13 Perhaps the most radical effort to recast all the theories of behavior into utility theory has been made by Gary Becker in his book, The Economic Approach to Human Behavior. Becker argues that human behavior is not compartmentalized into economic and non-economic behavior, but that individuals do act to maximize their advantages. Thus, Becker has taken microeconomic theory and extended it to marriage, crime, and what would usually be thought of as "non-economic" areas. In an essay, "A Theory of Marriage," he treats marriage as a two-person firm with one or the other of the partners as the entrepreneur, "hiring" the other at a salary, and seeking to increase the "firm's" profits by the investments and expenditures made. Becker's students have applied utility theory to crime by seeing such actions as risk-taking activities which are maximized when the penalties are low. And another student of Becker, George L. Priest, has argued about law, "With respect to the probability of litigation, a legal rule is like any commodity. A change in relative prices (here as between efficient and inefficient rules) will change the distribution of consumption choices toward relatively cheaper and away from more expensive commodities."

The crux of the argument is that where there is the pain of choice forced upon us by scarce resources, we will take the most "pleasurable" route. But this hedonic calculus is itself the most narrowly culturally-bound interpretation of human behavior, ignoring the large areas of traditionalism on the one hand and moral reflection on the other.
in pure "rational" ways, and so becomes the primary agent in "clearing all markets." In recent years, an entire literature has arisen which disputes that simple-minded idea. In this issue, Harvey Leibenstein expounds his theory of X-efficiency, which undercuts some of the traditional assumptions of microeconomics. And Herbert Simon has won the Nobel Prize in economics, in part, for his theory that firms operate not as "profit-maximizing" but as "satisficing" institutions.

Can utility theory explain "wage stickiness"? Is it only a "money illusion" as Keynes thought? In a recent, illuminating discussion, The Crisis in Keynesian Economics, Sir John Hicks suggests a very different answer from the Keynesian one. Reviewing the history of British wages for the past 70 or so years, Sir John suggests that (except for a few rather abrupt periods of rapid slide) wages and employment tended to be sticky because neither employers nor unions wanted to disrupt traditional relationships. "The 'stickiness' is not a matter of 'money illusion'; it is a matter of continuity." In looking at the more recent history, Sir John points out that the major factor in the movement of wages is a combination of "expectations" and a sense of "fairness." It is the "social pressure," he writes, that has become dominant, and the sense of comparative fairness which prompts the competitive pressure. "Wages rise, whether or not there is labour scarcity; so they rise in slumps as much, or nearly as much as in booms. Everyone, on some comparison or other, feels left behind. . . ."

So, in this crucial area of utility theory it is sociology ("irrational actions"?) that seems often to provide more adequate basis for explanation than standard economic theory.

And to the degree that government enters the picture, conventional utility theory is at a loss as to how to deal with it. Individuals and households presumably are utility maximizers, firms, partnerships, and corporations are profit maximizers. But what do governments maximize? The older German school of public finance, with typical Teutonic thoroughness, states that governments maximize utility for something called the State. Anglo-American economic theory, since its premises are individualistic, ignores the problem completely. Between the gap of these two views one can drive most of the GNP of the country.

Clearly, the question is the most central one of our time, since governments, even in "market societies," account for between 20 percent and 60 percent of all economic transactions. What does the government maximize?
Much of the discussion in contemporary economic theory of government expenditure, priced in market terms, centers on the question of "public goods." The question was re-opened in 1954 in an essay by Samuelson on "The Pure Theory of Public Expenditure." But the problem is couched in the terms of individualistic economics. It assumes that, where there will be public goods (i.e., goods which are not divisible and would be provided to all), consumers will hide their "preference functions"—i.e., how much they would be willing to pay for it—since they know that it will be available to all. The question of an optimal price, or tax, thus is difficult to answer. Samuelson, with his customary brilliance, constructed a "pseudo-market equilibrium," using an abstract mathematical model—its only difficulty being that it has little relevance to actual behavior.

But none of this provides any insight into the question of how these collective decisions are made or should be made. An economist might reply that this is a matter for political theory, not economics, but when government is so massively involved in the economy, such an answer is surely unsatisfactory.

One has to return to the historical point I made at the beginning of this essay. Modern economic theory derived from classical liberalism. But that liberalism was anti-political; that is the meaning of laissez-faire. Adam Smith did not look to government to set the boundaries of individual actions, he looked to civil society, that network of social ties of family, clan and neighborhood, parish and church, to set the general standards of moral conduct. Liberalism sought for the autonomy of realms: not only the distinction between Church and State as temporal powers, but the division between economics and politics as autonomous activities of individuals. The crucial point, as made so brilliantly by Carl Schmitt in The Concept of the Political, is that economics treats individuals as competitors, while politics divides individuals into friends and enemies. One need not accept this extreme formulation of the character of politics, but a qualitative difference in the way individuals behave in these two realms does exist. But the corollary of Schmitt's argument has greater empirical force: Once an economic action becomes political, it becomes inextricably bound with the State and implicitly accepts the power of the State to adjudge the validity of these actions.

But what is the State? Is it an agency, in contemporary Western society, to shore up capitalism, even over and above the interests of individual capitalist firms? Is it a Leviathan, seeking to
engorge itself on the economic body of the country for the benefit of the bureaucracy—or the "new class"—that fosters it? Is it an "ad hoc" instrument evolved out of the "functional necessity" that some central body manage the interdependence and complexity generated by the new scales of the communications and technological revolutions of modern society? And since it is a political body, having to manage economic institutions, who is it intended to serve? Economic theory, even as a technical instrument to analyze the consequences of such decisions, is highly limited unless it attempts some answers to these questions.¹⁴

Markets, free and otherwise

The question of markets is one that has threaded economic discussion since the time Adam Smith first observed that merchants habitually came together over a pint of bitters, among other things, to fix the price of the product they were selling. Shop talk is price talk. References to market imperfections or market failures are as frequent in economic literature as the obeisance to the other obligatory caution of ceteris paribus. And the sticking point in any empirical theory of equilibrium is why there are persistent disequilibria in certain markets—as in labor markets.

Until recently—and except for Chamberlin’s theory of distinct product markets, rather than homogeneous price markets in an industry—there has been a lack of comprehensive theory as to the character of actual market structures in the contemporary economy. Within the last decade, a rough consensus has emerged—though the terms vary. This is what Sir John Hicks has called “fix-price” and “flex-price” markets, or what William Nordhaus of Yale (and the late Arthur Okun) have called “auction” and “administered or customer” markets. As Sir John Hicks put it in his 1973 lectures:

¹⁴ The one economist who did begin some answers was Joseph Schumpeter in a 1918 essay, long neglected until now, entitled "The Crisis of the Tax State." Rejecting the traditional approach of public finance, which sought to measure the incidence of different kinds of taxes, Schumpeter wrote: "Once the state exists as a reality and as a social institution, once it has become the center of the persons who man the governmental machine [its nature] can no longer be understood merely from the fiscal standpoint, and for which finances now become a serving tool. . . . The kind and level of taxes are determined by the social structure, but once taxes exist they become a handle, as it were, which social powers can grip in order to change the structure.” To understand this new phenomena, Schumpeter called for the development of a new field which he called, ironically, “fiscal sociology.” For a discussion of these points, see my Cultural Contradictions of Capitalism, pp. 227–232.
The fact surely is that in modern (capitalist) economies there are, at least, two sorts of markets. There are markets where prices are set by producers; and for those markets, which include a large part of the markets for industrial products, the 'fixprice' assumption makes good sense. But there are other markets, 'flexprice' or speculative markets, at which prices are still determined by supply and demand. . . .

A pure flexprice theory . . . is not realistic, though it may be instructive. It is doubtless less realistic than a pure fixprice theory. But a pure fixprice theory is itself not wholly realistic. For speculative markets (such as markets for staple commodities, not to speak of financial markets) do exist.

What we need is a theory which will take into account both sorts of markets, a theory in which both fixprice and flexprice have a place. Why some sorts of commodities should be traded on one sort of market and some on the other is an interesting question. . . .

Why these different kinds of markets have developed, we can leave to the sociological economist. But the evident fact of their existence calls into question the idea of facilitative resource adjustments through market prices—an idea which still underlies all the models of economic behavior.

The consequence of "fixprice" markets is price rigidities, which sometimes may be beneficial, sometimes not. Market power may inhibit flexibility, but it also introduces stability. In periods of shortages (where black markets often develop) it is more often the large corporation that will eschew large price increases for established customers in order to maintain long-term relations. (It is what Max Weber meant by rational capitalism rather than "Levantine" trading.) In periods of unemployment, it is the basis of the "implicit contract" (or what Arthur Okun has called the "invisible handshake") when employers, bound by traditional relationships, or even some residual obligation, hold on to a labor force as long as they can, and thereby induce stickiness into the labor markets.

How far all this traditionalism, these rigidities, these fixprice markets, extend we do not know. But it is clear that price signals are not the switching or shunting mechanisms of standard economic theory which create equilibria, or "optimal" distribution of resources, in the society. And if institutional and political factors may become more important than market determinants, all these raise crucial questions for public policy. One can demand, as old-fashioned populists and new-fangled monetarists do, radical policies (e.g., a more vigorous application of anti-trust law) to bring in
more competition and price flexibility in the economy. Or one can ask for more government intervention to shift resources, such as the proposals to help "sunrise" industries (i.e., new technological firms) and kill off "sunset" industries (such as some of the large auto and steel companies). Or we might have tax incentive policies (T.I.P.) as proposed by Henry Wallich, Arthur Okun, and others, to moderate price and wage increases that go beyond official guideline levels. All these are crucial questions of political economy, and the standard models of economic theory give us little help in answering them.

V

Rationality or time?

There is little question that most economies are in trouble. But it is misleading to think that these perplexities are peculiar to capitalist or to market economics. Poland faces problems of capital accumulation, sector imbalances, and price distortions which seem little different from those of many Western economies. The Soviet Union finds its growth rate falling because of planning inflexibilities and low productivity. On the other hand, Japan, Singapore, and Taiwan seem to be doing very well. Perhaps the answers lie in culture and national character, or the historical release of what Keynes called the "animal spirits" that seem to animate some societies at specific times and then exhaust themselves.

It is quixotic to note that at the beginning of the 20th century the central question that concerned sociology, as posed by Max Weber, was: Why did rational capitalism develop in the West, rather than in China or other parts of the non-Western world? And his answer was that capitalism had been abetted by a new set of legitimations (principally religious in orientation) that tore down *traditional* relationships (guilds, parishes, clans), fostered *individualism*, and made all resources (such as land and labor) completely mobile, subject to the market. Yet at the close of the 20th century, the emerging sociological question seems to be why capitalism has been so successful in a Japan which has *maintained* traditional relationships (and even converted the traditional village structures into the factory structures), emphasized communalism and consensus, and provided long-term if not life-time employment for its workers.

The economic theory that developed in the West in the last 200 years is impotent before such questions. It has been ahistori-
cal and abstractly analytical. But that is precisely the rub. Economic theory, by and large, is based on the model of classical mechanics and operates in the image of the natural sciences. The model leads to the idea of an "equilibrium" in which the "natural" forces seek to reassert themselves and restore economic relations to a balance, the fulcrum of which is "perfect competition."

The result is a basically mechanistic view of human behavior, and when discordances occur, there ensues a series of desperate and twisted efforts to square the "nominal magnitudes" (i.e., the irrational) with the "real magnitudes" (the rational) that underlie the system. How Hegelian!

But this enterprise ignores a crucial distinction. Classical mechanics is *constitutive* of nature; it seeks to discern the intrinsic order which is hidden in the properties of the system. Economics is *not* constitutive. It is a *constructed* logic, at best an "as if" model of how some resource distributions would be made if individuals acted in a specified "logical" way. But there is no single "underlying structure" to a society. Since men act variously by habit and custom, irrationally or zealously, by conscious design to change institutions or redesign social arrangements, there is no intrinsic order, there are no "economic Laws" constituting the "structure" of the economy; there are only different patterns of historical behavior. Thus, economics, and economic theory, cannot be a "closed system." The social sciences necessarily are partial "prisms," selecting out different facets of behavior in order to understand the causes of change and their meanings. And what sets their boundaries is not the "essential" properties of a subject matter, but the different questions they ask, which is why they are so permeable.15

Keynes himself, it may be recalled, had raised doubts about the possibility of predicting human behavior, especially when such

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15 The strength of contemporary economic theory, it should be pointed out, derives from the narrowing of the questions and the powerful technical apparatus of mathematical reasoning. In becoming an "analytical science" rather than a descriptive inquiry, the simplifying assumption was that it would treat "capital" and "labor" as homogeneous entities and see all exchanges in relation to price. But all this itself entailed a large cost. The first was to ignore technical advance and even when, in a brilliant article in 1957, Robert Solow sought to estimate the contribution of technology to economic growth, he had to treat it as a "residual," a left-over after other inputs were accounted for—a finding later disputed by Jorgenson and Griliches, who argued that capital inputs alone could explain such advances.

Contemporary economic theory lacks a scheme to account for technology, innovation, demographic factors, or entrepreneurship. All of these are merely "sociological."
behavior is based on variable expectations. To put that issue more formally, as G. L. S. Shackle does in his book, *Epistemics & Economics*, the economic theorist can choose either “rationality” or “time.” The theory which rejects time can set forth propositions such as subjective marginalism, partial or general equilibrium. But the introduction of time not only produces uncertainty; it also necessitates understanding the “non-rational” behavior if it is to deal with the choices that human beings make.\(^1\)

**An “interpretative” economic theory**

What are the roads to reconstruction? What ultimately provides direction for the economy, as Veblen pointed out long ago, is not the price system but the value system of the culture in which the economy is embedded. The price system is a mechanism for the relative allocation of goods and services, not in accordance with human nature (or utility maximization), but within the framework of the existing distribution of income and the cultural patterns of social wants. Accordingly, economic guidance can only be distributive as equitably as the cultural value system which shapes it.

An “interpretative” economic theory\(^2\) might have to consider that its own analysis only makes economic sense when joined to sociology. For the hard-nosed economist, this is a fate feared worse than the pox, yet one finds, pleasantly, that even so rigorous a theorist as Robert M. Solow, in his presidential address to the American Economic Association (December 1979), seeking to formulate a theory of wage stickiness to fill in the chinks in Keynesian theory, resorts to explanations such as “social conventions” and “codes of good behavior enforced by social pressure” to explain the “persistence of disequilibrium in the labor market.” And he concludes, “Economic man is a social . . . category.” That, too, is a modest start toward the reconstruction of economic theory.

An economic theory has to understand its underpinnings not only in relations to politics, but to political theory. The great paradox of

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\(^1\) To recall an earlier point about Say’s Law and Keynes: As a “static” feature, a full-employment equilibrium is theoretically possible within a closed and timeless system, but the process of moving toward an equilibrium through time displaces the equilibrium point itself, so that one may simply be chasing a will of the wisp.

\(^2\) I use the term “interpretative” in accordance with a growing usage in the social sciences to define a mode of inquiry which is not positivist but defines inquiry in relation to the meanings of actions of individuals, rather than just the “observable behavior” itself.
all modern social theory is that political philosophy, going back to Machiavelli, Hobbes, and Rousseau, saw men as being ruled by appetite, passions, or will, while economic theory has defined human actions as rational behavior—albeit such rationality is defined in purely instrumental and functional terms.\footnote{Since economic theory, from the start, has eschewed moral norms, the “ends” of human actions were taken as diverse, or as given, and economics concentrated on efficacious means.} Only Max Weber, among modern theorists, has sought to sketch a theory of social action that takes into account the rational and the non-rational, and to look at economics and administration, politics and religion, in terms of the two modes.

Within that context, economic theory has to integrate political practice within its body of understandings. Price theory is *distributive*. Resources flow to the most profitable (or least costly) places. Necessarily, some persons lose; what Schumpeter has called “creative destruction,” or, more recently, Lester Thurow has called the zero-sum game. But political practice is *redistributive*, responding to the weights (votes, money, power) of the different interest, functional, ethnic, advantaged and disadvantaged groups in the society.

And, finally, economic theory has to return to time (in the logical sense) and to history (in the empirical fact)\footnote{Mancur Olson cites evidence (from the findings of the monetarist Philip Cagan) that the tendency for prices to fall during recessions has diminished steadily over time. And, as he writes, in an unpublished essay, “An Evolutionary Approach to Macroeconomics”: Obviously something is accumulating or progressing over time such as changing policies, structures or institutions, which is changing the character of the macroeconomic problem. We know, both from the tendency for real output to vary more with changes in aggregate demand and from direct observation of the prices themselves, that stickier prices and wages are crucial to the change that is taking place. But we do not explain the change by referring to sticky prices, any more than we explain anything by referring to *ad hoc* assumptions like ‘rigid wages’ or merely descriptive concepts like Phillips curves. The cause of the fact that most wages and prices were less flexible in the interwar years than in the nineteenth century, and still less flexible in these stagflationary times, must be found. That cause, in turn, must play a leading role in our macroeconomic theory.} in order to be responsive to the complex new social arrangements that derive from the widening of scales and new arenas of economic and social actions. The world of Adam Smith was one of thousands of small family firms, of visible merchants and customers, so that Smith could look to civil society, not government, as the arena in which competition would be regulated by custom and ethics, rather than by contract and law. A post-industrial order is one in which eco-
nomic innovation is ruled by the codification of theoretical knowledge, yet contemporary economic theory, rooted in a world of agriculture and industry, has no means of measuring the “output” of science, or little, even, of technological change. Yet without such understandings, how effective can economic theory be as guidance, let alone as a “model” of the economic reality?

The crux of my argument is an epistemological one. Economic theory, unlike physics, is not constitutive of a single underlying reality. Nor can it be, pace Alfred Marshall (and Gary Becker), timeless generalizations about human behavior. In consequence, economics cannot be, as its model in classical mechanics, a “closed system” which ignores change or the effort to discern specific patterns of change.

Does this mean the abandonment of the powerful logical engine of rationality and equilibria, of maximization and markets, to the vagaries of sociology and the unrestrained wiles of politics? Not at all. “At least from the time of the physiocrats and Adam Smith,” Paul Samuelson has observed, “there has never been absent from the main body of economic literature the feeling that in some sense perfect competition represented an optimal situation.” We have also seen, in recent years, the growth of a large body of literature in welfare economics which, deriving from Pareto-optimality, defines a set of optimal outcomes for allocations of resources and distributions of incomes. But this is a divergence, and a necessary one, from the positivist tradition which has ruled economic theory. The corollary of all this is that economic theory should not be taken as a “model” (or template) of how human beings behave, for these will always be inadequate, but as a “Utopia,” a set of ideal standards against which one can debate and judge different policy actions and their consequences. That, it seems to me, is the meaningful role of any social “science” in theorizing about human affairs.

20 The one economist, again, who wrestled with these questions, was Schumpeter. He developed a theory of innovation, although this theory was never integrated into neoclassical analysis.