that could usefully be juxtaposed to, for example, the experiences of the populations of currently developing societies. Historical demography is an iconoclastic rather than a synthetic science.

However, its combination of meticulous demography, methodological innovation, imaginative analysis, and substantive importance make *The Population History of England* a landmark work in historical demography and the social-scientific approach to history. If not the last word on English population before 1801, it surely is now the best word. Its methods, findings, and insights will stimulate researchers for years to come.

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Economic Models Under Challenge

Rational Expectations and Econometric Practice. ROBERT E. LUCAS, JR., and THOMAS J. SARGENT, Eds. University of Minnesota Press, Minneapolis, 1981. xl, 690 pp., illus. Cloth, $60; paper (in two volumes), $13.95 per volume.

Studies in Business-Cycle Theory. ROBERT E. LUCAS, JR. MIT Press, Cambridge, Mass., 1981. xii, 300 pp., illus. $17.50.

The theory of macroeconomics has been irreversibly affected by the powerful and original developments pioneered by Robert Lucas and Thomas Sargent. Those of us who disagree with them have been forced to rethink our models, assumptions, and prejudices. And we have co-opted some of their ideas. They have converted to their cause a noticeable portion of professional economists; they have influenced economic policy; and they have done all this against the opposition and even the ridicule of the economics mainstream.

The mainstream view is what Paul Samuelson called the neoclassical synthesis. This tradition owes much to the work of John Maynard Keynes and accepts that active policy measures are required in order to stabilize the economy and prevent excessive booms and slumps. But Keynes wished to discard most of the neoclassical theory of the allocation of scarce resources, with its assumption that people and businesses act rationally in their own interest. The Samuelsonian synthesis, on the other hand, developed an uneasy truce wherein the general level of prices and wages is determined in one way but then neoclassical ideas take over to explain relative prices, or how much one good costs relative to another.

The mainstream view, therefore, contains a potentially serious inconsistency between macro- and microeconomics, but as long as the economy performed well the worries were muted. Starting in the mid-1960's things started to go wrong, and the combinations of inflation and unemployment we have experienced since then have grown steadily worse, despite or because of the efforts of both Democratic and Republican administrations and advisers. The time is right for new approaches.

The collection edited by Lucas and Sargent covers many of the major contributions to rational expectations theory and a number of empirical investigations. These papers explain the assumption of rational expectations, as first proposed by John F. Muth, and how this assumption has been incorporated into a new model of the business cycle. Several papers test the theory against time-series evidence and discuss the appropriate statistical methods to be used when assuming rational expectations. The implications of the new theory for macroeconomic policy are developed in detail. For general readers the collection has two shortcomings. First, many of the best papers are omitted, because they are in the Lucas collection. Second, all the papers were written for an audience of professional economists, and noneconomists will find them pretty tough going. The main use of this collection is as a reference for the professional economist.

Studies in Business-Cycle Theory, the collection of papers by Lucas, does contain several nontechnical articles in which the main features of his new approach to macroeconomics are set out, together with a discussion of the implications of the models and the motivation behind them. At his best, Lucas writes well, and one can see him wrestling with his feelings as he goes out of his way to praise his intellectual opponents and then pours withering scorn on their ideas. It makes for good reading. Someone with only a modest knowledge of economics who wants a serious introduction to the new theory could get a lot out of this book.

Rather than dealing with the papers in the volumes individually it makes more sense for me to try and explain what the new ideas are all about. The theory has three basic ingredients. The first is that prices and wages are determined competitively and adjust with complete flexibility to clear all markets; that is, supply always equals demand. The second is that markets behave as if the persons trading in them form unbiased—"rational"—expectations of all the uncertain variables that affect their own decisions. (This means that individuals and firms must have an intuitive understanding not only of how they are affected by economic events occurring in their own particular industry or market but also of how general monetary and fiscal policy and even worldwide economic events will affect them.) The third is that observed cyclical fluctuations in the economy result from the short-run errors that individuals make. People do have limited information, since knowing probable values does not mean knowing what actually happens.

Given these axioms, it follows that in the absence of any major disturbance or shock the economy will operate at an efficient equilibrium point where no one can be made better off without making someone else worse off.

At the level of the individual firm or worker, changes in the technology, movements in world trade, and even the weather may all create uncertainty and lead to layoffs and unemployment. Output and employment fluctuations may be quite large for particular firms or industries, but in the aggregate these will tend to average out, so that total output and unemployment will remain fairly constant. The unemployment rate in equilibrium, which is called the "natural rate," results from the frictional and structural adjustments that are occurring in individual firms and markets.

Causes of Business Cycles

Fluctuations in the aggregate demand for goods are taken to be the main cause of observed business cycles, where output and unemployment for the economy as a whole deviate from their equilibrium or natural levels. The rational expectations economists see erratic and unpredictable government policy as the principal cause of such demand fluctuations. In particular, changes in the quantity of money induce cyclical fluctuations in the economy.

When the Federal Reserve Board acts

to reduce the supply of money, there is less money relative to the amount of goods being produced. Money is scarce, and so the terms upon which goods and money are exchanged alter—the price level declines. (In practice this may mean that the rate of inflation has declined, not the price level itself. But that is only a complication and does not change the basic story.) An individual firm finds that the price it can get for its own product has declined, but at first it does not realize that the general price level has declined. That is an important distinction, for if everyone knew that all prices had fallen there should be no effect on output or employment. An across-the-board change in all prices and wages is just like a change in the units of measurement; firms still maximize their profits at the same level of production. But because each individual firm believes at first that its own price has fallen relative to other prices, it cuts back its output. (This contrasts with the mainstream model, where tight money has no direct effect on the price level, but instead raises interest rates. High interest rates depress aggregate demand, particularly for houses and automobiles, and output falls. Slowly the inflation rate then declines.) An increase in the money supply runs this process in reverse, as firms believe their relative prices have risen and increase their output.

The power of policy changes to affect real output is limited, however, because people soon catch on to the fact that the price level has changed. They go back to producing at their normal or equilibrium level. Moreover, rational expectations theorists stress that changes in the quantity of money should not be viewed as isolated events but as actions growing out of a particular policy regime. Private individuals then come to learn the way in which policy is made, and it is only the unanticipated government policy changes that can cause output to vary or unemployment to deviate from its natural rate. This means, in particular, that any systematic or nonrandom rule for adjusting policy in response to events will have no effect on output or unemployment, once the private sector has learned of it. Thus in this model systematic stabilization policy is quite powerless to stabilize. This "policy ineffectiveness" theorem, stated most effectively by Sargent and his colleague Neil Wallace, startled the profession and has influenced current thinking in Washington.

As well as presenting their own ideas, rational expectations theorists have been forceful critics of the mainstream model. Lucas and Sargent have frankly acknowledged the flaws in their models and the rather mixed results of empirical tests of them. But they are wholehearted proponents of their approach, nonetheless, because they believe that any alternative to it is intellectually bankrupt. Keynes assumed that money wages were fixed. This assumption was subsequently replaced in the mainstream macro models by the Phillips curve, an empirically based relation in which the rate of change of money wages responds to any excess or shortage of labor, but only slowly. When coupled with another empirically based relation that links prices to wages, this provided the basis for a dynamic modeling of the economy in which output, unemployment, and inflation evolve over time with only weak and slow convergence to the optimum, or the economy may become unstable. This model then makes a case for stabilizing policy measures. Rational expectations theorists have attacked these mainstream models as being without a basis in the theory of individual decision-making. They point out that predictions made from a Phillips curve estimated through the 1960's proved inaccurate in the 1970's. This is clear evidence that these estimates had not uncovered a long-run structural relation of the economy.

Price and Wage Adjustment

The slow adjustment or stickiness of the rate of wage and price inflation that is a feature of the mainstream models implies that many things are bought and sold at prices that are not at their market-clearing levels. In particular, wages adjust slowly so that jobs are rationed during recessions. This means that the unemployed are considered to be idle involuntarily. They would like to work at prevailing wages but cannot find jobs. Rational expectations theorists argue against this view, saying that except in periods of wage and price controls any firm can choose to change the price it charges or the wage it pays. If the firm chooses not to change or if workers refuse to accept a cut in pay then, almost by definition, any excess unemployment or slack capacity must be voluntary. Lucas states that cyclical unemployment is a form of leisure.

An important implication of the mainstream models is that policy faces a trade-off between inflation and unemployment. Stickiness of wages and prices means, in the policy context, that an entrenched inflation has considerable inertia and cutting the inflation rate involves a prolonged recession. Rational expectations theorists concede that tight money in the past has caused recession, but this is because such policy changes have been unexpected. What is needed, they argue, is a fixed policy rule, possibly embodied in a constitutional amendment, that makes policy constant and predictable by forcing the Federal Reserve Board to expand the money supply at, say, 4 percent a year. This is fast enough to accommodate real output growth but not to allow inflation. A balanced-budget commitment would also be needed in order to back up the monetary rule. Such a change in the way policy is made could stop inflation without serious recession, they say.

Difficulties of the New Theory

How much of all this should you believe? I do not wish to offer a ringing endorsement of the old mainstream approach. Clearly things have gone wrong in the 1970's and new ideas are needed. But I do think the new school has gone off on the wrong track. The first problem with the Lucas-Sargent business-cycle model is that it does not fit the facts at all well. Their theory makes very tight and specific predictions about the relationships among economic variables, and even the empirical tests run by advocates of the theory have often found these predictions rejected by the data. Sargent is particularly to be commended for both reporting unfavorable results and admitting the problems they create.

The two biggest difficulties the theory has with the facts can be explained fairly simply. The first is called the persistence problem. A typical recession lasts a long time. Business was clearly depressed from 1958 to 1962 and from 1975 to 1977. From 1931 to 1941 there was excess unemployment. But the new theory of the cycle makes excess unemployment a result purely of unexpected events. This should mean that unemployment fluctuates randomly around its natural rate or equilibrium point. Instead, the unemployment rate is highly correlated with its own past values, reflecting the usual length of recessions.

The problem shows up acutely in the papers by Robert Barro in the Lucas and Sargent collection. Barro divides monetary policy changes into those that he says were anticipated and those that were unanticipated. He then finds that in regression analyses the unanticipated changes had an impact on output and unemployment whereas the anticipated ones did not, just as the new theory predicts. But his results in fact show that current output and unemployment are being affected by "unanticipated" changes in the money supply that happened one to two years earlier. The only rationale for his results consistent with the new model is that businesses are still adjusting to unanticipated events one to two years after they occurred.

There are various attempts to deal with the persistence problem facing the new theory, but these strike me as unconvincing. The most plausible on theoretical grounds is to postulate that firms cannot adjust their output or employment costlessly. Low output and employment levels this year follow low levels last year because the transition back to normal levels is costly. In practical terms this is less convincing. There are adjustment costs, to be sure, but they are small. Employment and output in a typical firm or industry rise and fall very substantially from month to month in normal times, so why cannot they be increased from year to year during a recovery?

More fundamentally, though, assuming that adjusting output and employment is costly gets you out of the frying pan and into the fire. The second major difficulty of the new theory comes about because it postulates that people's choices about how much to work or to produce are based only on wages or prices that are determined competitively in the marketplace. Their choices are never constrained by a shortage of jobs or customers. However, the typical cycle is characterized by large changes in output and employment but by only small changes in wages and prices. In many industries the cyclical movement of prices is very hard to detect at all. This means that supply responses or elasticities must be very large indeed—big quantity changes result from small price changes. Yet from observing people or firms when prices or wages have changed for reasons unrelated to the business cycle, we do not find such large responses. Adding adjustment costs makes this problem even worse, because it says that the change in output or employment from a given price or wage change will be even smaller.

Assumptions Compared with Events

Finally I turn to the new theorists' criticisms of the mainstream model. I agree with some of them. They are absolutely correct that the Phillips curve specification of the determinants of wage and price inflation collapsed in the 1970's and proved a totally unreliable guide to policy. They have forced a reconsideration of the role of expectational errors in models of the cycle and the extent to which stabilization policy works by fooling people. The idea that the private economy alters its own behavior depending upon the way in which monetary and fiscal policy are made is an important one. It also suggests that a resolute anti-inflation policy might work with less unemployment cost than is suggested by the past experience with haphazard anti-inflation policy. (Mrs. Thatcher's attempt to demonstrate this has not been a resounding success, however.) They are also correct that simply assuming price or wage stickiness is not enough; one must understand why.

But to say that wage and price stickiness are not well understood does not mean that such behavior does not exist. The relentless upward movement of money wages during the mid-1970's in the face of a deep recession demonstrates the lack of wage responsiveness to excess unemployment and job rationing. The collapse of the simple Phillips curve model of wage and price behavior convinced Lucas and Sargent that a model based on perfect markets was appropriate. It convinced others to ask how the OPEC oil cartel, the worldwide shift in food prices, the slowdown in productivity growth, and the decline in the dollar have affected inflation. Lucas and Sargent ignore all these major events, claiming that excessive monetary expansion by an out-of-control Federal Reserve Board is the only cause of inflation. On the theoretical side, there has also been some progress in understanding why wages and some prices fail to respond to short-run market imbalances. Farm prices do rise or fall depending upon supply and demand. But wages respond more to increases in the cost of living than to surpluses or shortages of labor. Recent approaches to understanding this pattern have stressed the differences between the markets for farm products and for labor. Most jobs last several years and employers treat their employees according to rules of fairness, responding perhaps to long-run changes in the economic climate but not to short-run conditions. The way to lessen the inconsistency in the neoclassical synthesis may be to improve the microeconomic analysis of individual decision-making, not to abandon the macroeconomic side.

It is claimed that the assumptions about the formation of expectations that are made in the mainstream macro models are arbitrary and should be replaced with the assumption of rational expectations. This is tricky. How much ı
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and fiscal policy to keep the economy on an even keel is profoundly conservative politically, contrary to the usual impression. It allows the free enterprise system to work well.

Scientists must be dismayed as well as amused by the constant wrangling among schools of thought in economics. From the inside these disputes are fun. But at stake is the prosperity of the country. I wish we could agree on some fundamentals. Eldridge Cleaver in his radical days commented that watching the political struggle in the United States is like being a passenger on an airplane diving toward the ground while two madmen struggle for the controls. The economic policy debate must seem the same way to most people. I understand Cleaver is now praying a lot. Perhaps that's the rational response.

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The Book Industry

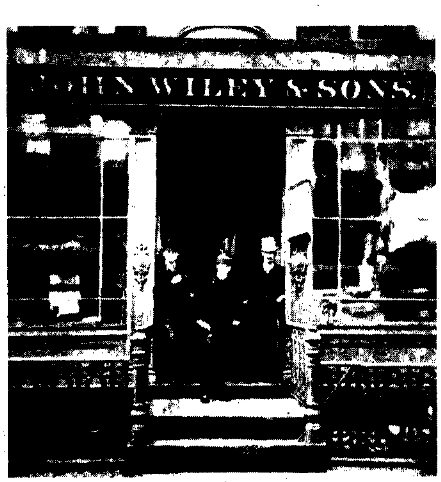
Books. The Culture and Commerce of Publishing. LEWIS A. COSER, CHARLES KADUSHIN, and WALTER W. POWELL. Basic Books, New York, 1982. xiv, 412 pp. $19.

Most of the literature about book publishing has been written by insiders—by publishers, editors, and others in the industry, including the trade press. There is no lack of engaging reminiscences, letters, how-to-do-it volumes, and reports on current trends. But outsiders have had little to say about how the publishing world works and the role of book publishing in the nation's intellectual life. The singular contribution of Coser, Kadushin, and Powell is to offer such an outsider's view of the industry—this one from the perspective of sociologists.

Their account should strike most insiders as a fair and informative one that confirms and, in many ways, broadens their own judgments. Readers who do not know much about publishing should find this book an eye-opener. It won't give them a complete picture of the book industry because the authors have chosen to exclude fiction from their inquiry, as well as such publishing concerns as copyright, book manufacturing, and computer technology, but it will tell them a great deal that is interesting and informative.

On balance, the authors take an optimistic view of the present and future of the book industry. They are struck more by the continuities than by the disruptions. The "tensions between commerce and culture," the epidemic of take-overs of distinguished independent publishers by conglomerates, the paperback revolution, the spread of chain bookstores—they all have precedents. Publishers have always had to be good businessmen as well as astute judges of manuscripts. Mergers have long been part of the publishing scene, and, if some publishers bought out by conglomerates have soon departed in rage, a high proportion of their employees report that they are pleased by higher salaries and benefits and the prospect of greater stability that appears to be offered by bigger firms over the long run. There are problems in book publishing—and perhaps a little madness in the multimillion-dollar bidding for best-seller paperback rights and the practice of shredding half of the mass-market paperbacks produced as part of the procedure for getting credit for unsold copies. But there are no crises.

Perhaps not everyone will be persuaded by the authors' relaxed perspective. The long-run effects of take-overs by conglomerates may not be the same as those of mergers between publishers. The implications of computer technology and the electronic revolution, which have not been taken into account, may not be fully appreciated. There may be reasons for serious concern about the prospect that half of the retail bookstore trade will soon be controlled by two chains, Walden and B. Dalton, which together already own more than 1000 stores. But the authors' point of view is certainly a reasonable one.



A New York publishing house in the 1880's.

A persistent theme throughout the book is the difficulty of making generalizations that are useful and that will stand up in the swirl of diversity that characterizes the industry. Indeed, this is not so much a single industry as an assemblage of industries—for textbooks, trade books, scholarly and professional books, and mass-market paperbacks. As the study makes clear, the sectors differ from each other greatly in the way they acquire manuscripts, produce books, and market them.

This diversity carries over to almost all phases of the industry. One gets the impression that almost any judgment invites a rejoinder or a qualification. How important are book reviews to the sale of a book? It all depends—what kinds of books, which review media, and so on.

A chapter on women in publishing—written by Michele Caplette rather than by one of the major authors—illustrates the conflicting trends. It is easy for women to find employment in the industry, and two out of three jobs in book publishing are held by women. But on the other hand the jobs they hold are generally dead-end, poorly paid positions with a high turnover.

On the bright side, an increasing proportion of women are moving at last into better-paying, more responsible positions in advertising and promotion, as acquisition editors and as managers of subsidiary rights. They are becoming visibly influential, unlike the few women who wielded some power in the past behind the scenes as assistants to publishers or as wives and sisters in family-owned firms. Nevertheless, the chapter concludes that women are still predominately at the bottom of the occupational hierarchy, and though they may be doing better than women in many other industries, such as television, they are only beginning to penetrate the ranks of the top executives. The best of them, concludes the author, can probably find greater opportunity by leaving publishing and becoming literary agents.

As sociologists, the authors say that their perspective differs from that of other outsiders, such as economists or literary critics, because they are "particularly attentive to the personal and organizational relations that nourish books." To illuminate these relationships they draw on the results of sample surveys, formal and informal interviews, and firsthand