ECONOMIC HISTORY: A NECESSARY THOUGH NOT SUFFICIENT CONDITION FOR AN ECONOMIST[†]

Maine and Texas

By Kenneth J. Arrow*

Henry David Thoreau said about the newly invented telegraph: "They tell us that Maine can now communicate with Texas. But does Maine have anything to say to Texas?" I suppose the existence and location of this panel shows that California and Massachusetts, at least, have much to say to Texas. But, as Dante explained so long ago, we must interpret texts not merely literally, but also allegorically and even spiritually. Our assigned subject asks that Maine and Texas be interpreted as Economic Analysis and Economic History, though not necessarily respectively.

I use the term "analysis," rather than "theory," because I want to contrast the aims of history and those of social science. Permit me to use the changes in my own thinking as illustration. I always found history very interesting and read heavily. As a graduate student, I qualified in economic history, which was compulsory, and never felt it to be an intrusion, as later generations of students did. As a faculty member, I had to consider the role of economic history in the curriculum, as well as the problem of filling vacancies there. I took it for granted that history was a necessity but recognized the difficulty of finding scholars who were both economists and historians. This was in the early 1950's, before a new generation solved that supply problem. I took it for granted that the role of history in the education of economists was as empirical evidence. It was a way of testing theories, on a par with contemporary empirical evidence. This view was reinforced by what was then the most significant use of history in economics, Simon Kuznets's development of long timeseries on national income and its components, with its strong implications for economic development and for the consumption function.

A lecture by the historian, Leonard Krieger, changed my view of the nature of history. There was then much discussion of the role of social science in history in general. Krieger was regarded as among the historians most sympathetic to social science. But in his lecture he made clear that history could not be regarded as simply a branch of social science. Its aims were different. It sought to study the individual case, while social science aimed at general principles. Social science, whether economics or another, might indeed be useful and even vital in interpreting a past event. Certainly, psychological theories of different kinds have been used, possibly not always with the best results, in interpreting the behavior of political leaders. But the use was to illuminate the particular event. The aim of historical study as such was not simply to serve as a source of data from which to infer and to test social science generaliza-

Of course, this does not preclude the use of the data thrown up by historical investigation for the purposes of social-scientific analysis. The two modes of inquiry are complementary, not substitutes. But they are not identical.

Let me draw a very close analogy from the natural world, that of geology. The underlying laws of geology are nothing but the standard laws of physics and chemistry.

[†]Discussants: Albert Fishow, University of California-Berkeley; Donald N. McCloskey, University of Iowa; Gavin Wright, Stanford University.

^{*}Departments of Economics and Operations Research, Stanford University, Stanford, CA 94305.

There is, from the viewpoint of scientific generalizations, nothing peculiar to geology. That water wears down rocks, that heat sources in the interior of the Earth can produce great changes in the Earth's surface, that the energy of the Earth derives in major part but not entirely from solar radiation, that under temperature and pressure the materials of the Earth form new chemical combinations, these relations and others determine the entire course of the Earth's development. Further, examination of the history of the Earth could in principle yield evidence about the measurements of specific chemical and physical reactions. In practice, though, observation in the laboratory is so much more efficient that the evidence of geological observation has probably been of little use to the underlying sciences except by way of suggesting research problems.

But geology is in fact a flourishing subject, and much of its interest is in the specific historical event. What is the history of the Appalachians and the Himalayas? What have been the movements of the Indian subcontinent? Why does Hawaii have the shape it does? It is in good measure a study of the specific. It is indeed history and a fascinating one.

The example of geology illustrates a recurrent topic in economics. Is economics a subject like physics, true for all time, or are its laws historically conditioned? The importance of history was on the rise throughout the nineteenth century, just when the abstract economic theory of David Ricardo was developed. Ricardo's doctrines were much attacked by contemporaries for lack of historical understanding. His disciple, John Stuart Mill, made clear that the laws of distribution were indeed historically conditioned; the classical laws of value held only in an economy in which exchange was governed by markets. So, too, the theory of plate tectonics is historically conditioned. It is a valid statement about the Earth today and for a long period in the past. It could not have held when the Earth was sufficiently hot, and it may or may not be true of other planets.

Physics and chemistry have clearly been very useful to geology, interpreted as history.

What does standard economic theory have to contribute to economic history? It could fail on several grounds. It might be so overwhelmingly powerful a theory that history becomes uninteresting, merely a playing out of a well-defined script. It could be so wrong that it is an obstacle to understanding. W. J. Cunningham attacked Ricardo and Marshall about 1890 for interpreting rent in the Tudor period in Ricardian terms, not recognizing the differences in historical conditions.

The first obstacle, the power of the theory, is clearly not valid, though some economic theorists have spoken as if it were. In form, neoclassical theory is a statement of the implications of tastes, technology, and expectations for prices and quantities. (Other variations of economic theory have a similar form, though different content.) There is plenty of room for historical specificity in the conditions even if economic theory were more reliable than it is in drawing conclusions from them. There is nothing in economic theory which specifies that tastes remain unchanged, and a great deal of empirical knowledge about changes in technology. Indeed, it may be complained rather that economic theory does not sufficiently constrain historical determination, particularly when the data are not sufficient.

In fact, I think it would be widely accepted that using the ideas and approaches of economic theory has been useful in economic history. Perhaps most important, economic theory has raised new questions for history. It asks how economic institutions work in redirecting the flow of resources, not merely their intended workings. Our views of the relations between railroads and economic growth in the nineteenth century, of the diffusion of specific technological innovations such as the reaper, or of the economic consequences and functioning of slavery have all been seriously altered in ways that required new ways of thinking and suggested search for new kinds of evidence. Measuring the economic conditions of the masses of the population may have been driven by political aims as much as by modern welfare economics, but the appropriate measures and data have certainly been much clarified by the latter. I have already alluded to long timeseries on national income, a concept drawn from economic analysis, as a major contribution to our understanding of the past, both as to constancies and as to structural change.

But the example of national income analysis does remind us of a danger in the use of economic theory in economic history. There is a bias towards flattening out the particularities of the past. The more one uses categories drawn from the need to generalize, the less marked is the difference among the instantiations. This is not a logical consequence of the use of theoretical constructs. As already emphasized, each historical episode can in principle be interpreted as the application of general principles to unique contexts; but the bias drawn from theory is likely to be to emphasize generality at the expense of particularity. One is reminded of earlier modes of historical interpretation, in which every catastrophe was the workings of the hand of God. Consider also the many theories for the interpretation of myths. where they are all considered as illustrations of some general principle, whether it be Frazer's dying king, Muller's rising and setting sun, or Freud's Oedipus complex, or even the structuralist seeking of a universal form to myth. What is lost is the sense that myths are different; it is not true that when you've heard one, you've heard them all.

What about the uses of history in the development of economic analysis? There are many, but let me pick two, both alluded to earlier. One is simply the use of economic history as a source of empirical evidence for testing theories and estimating relations, what I referred to earlier as my naive view on the role of history. It is far from exhausting the content of history, but it is certainly one of its uses. When an examination of long timeseries shows that interest rates do not fully adjust for inflation, as Lawrence Summers has recently shown, the routine acceptance of the Fisher effect in analysis of contemporary conditions must surely be questioned. The regular patterns of consumption described by Engel's laws can be confirmed by historical shifts in industrial structure as well as by budget studies, incidentally making it hard to maintain simple models of homogeneous economic growth. Studies of past hyperinflations and their endings test theories of inflation. The historical analysis of individual business cycles was a live field after the pioneering work of Walt Rostow from 1946 to about 1960; it was neglected because of one-sided theories, first Keynesian and then monetarist, but I hope Peter Temin's work signals a revival. Such work is both history itself and a testing ground for the many relations which define cyclical fluctuations.

A second use of history in the development of economic analysis is a definition of its historical conditioning, to pick up again an earlier point. Before economic analysis had much of an effect on economic history. historians debated whether and which earlier periods could be described as capitalist or almost so. The great classical historian, M. I. Rostovtzeff, found the early Roman Empire to be governed by modern economic institutions, mobility, profit seeking, and so forth. He has been ridiculed for this by the current leading authority, Moses Finley, who finds little evidence of rational economic behavior in the ancient world. Again, Henri Pirenne found merchants and traders in a few centuries around the year 1000 to be thoroughgoing profit seekers, acutely sensitive to price differences; but the crystallization of the guild system, according to Pirenne, subsequently created a different economic world. It is not for the theorists to assess the very specialized evidence available. Still, there is some suggestion that the economic world of the past is not entirely different from that of our theories in the sharp rise in real wages after the radical shift in the land-labor ratio occasioned by the Black Death.

Closely interwined with historical conditioning of theory is national or cultural conditioning. The study of the past is similar to that of the present elsewhere. There are, or at least seem to be, very large differences even among capitalist countries in such basic economic variables as savings rates and rates and levels of productivity growth. We find them even between such economically and culturally similar nations as the United States and Canada; there are significant differences in per capita incomes, productivity (even controlling for capital equipment, as in the

automobile industry), and labor union membership and activity. When we go farther afield, the differences increase. Studies have shown, for example, that real wage flexibility is distinctly lower in Western Europe than in the United States. Among the many differences between Japan and the United States, we might notice differences in industrial organization even in virtually identical technologies. Large corporations there perform innovative tasks which here seem best done by small firms. Perhaps connected are the well-known or at least widely alleged differences in organizational loyalty and the role of consensus in decision making within the large firm.

Cross-country comparisons of this kind are analogous to historical comparisons in exploring the range of validity of economic generalizations. But the relation is deeper.

Presumably, the international differences, insofar as they are not simply explainable by differences in natural resources, are themselves the result of history. It has frequently been suggested by political scientists that the fact that the United States was created by a revolution while English-speaking Canada was in part a reaction to the American Revolution has important and lasting effects. The cultural differences between nations, with all their implications for polity and economy, are precipitates of past events, sometimes from the far past. In an ideal theory, perhaps, the whole influence of the past would be summed up in observations on the present. But such a theory cannot be stated in any complex uncontrolled system, not even for the Earth, as we have seen. It will always be true that practical understanding of the present will require knowledge of the past.