

# After Samuelson, Who Needs Adam Smith?

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I MUST apologize to my friend, Paul Samuelson, for using his name as a symbol. To have one's name become a symbol, however, is even greater fame than the Nobel Prize, so perhaps he will forgive me. What the symbol stands for in this case is modern economics, of which Samuelson's textbook,<sup>1</sup> and even more perhaps his *Foundations of Economic Analysis*,<sup>2</sup> are widely recognized as outstanding examples. I use Adam Smith, also, partly as a symbol as representing the ancients or the classics, but also as representing something quite unique in himself.

A great debate on the virtues of the ancients versus the moderns took place in Europe around the seventeenth century and indeed in China in the twentieth century, as to whether modern writers should be given inferior, equal, or superior standing with the ancients. There were those who argued that all good things had already been said long ago, and that therefore the modern writers were only feeble repetitions of the ancients. The moderns might be useful for divertimento or perhaps for commentary, but were in no sense a substitute for the writers of antiquity. We see this, of course, in the doctrine widely held in the Christian church, that the canon of the scriptures was irrevocably closed. We saw it also in secular education in the reverence for the Greek and the Latin authors in Europe, and also for the classical writers in China. Reverence for scriptures is by no means confined to Christianity; it is even stronger in Islam, is moderately strong in Hinduism and Buddhism, and, of course, is very strong indeed in Judaism and even in some forms of Marxism. Any-

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1. Paul Samuelson, *Economics: An Introductory Analysis*, 8th ed. (New York, 1970).

2. Paul Samuelson, *Foundations of Economic Analysis* (New York, 1965).

where, indeed, that the basic revelation is regarded as given in the past and only to be interpreted in the present, we find this attitude.

This first position might well be said to be dominant until the rise of science, which was what really stimulated the great seventeenth-century debate. In literature and the arts the rise of a very high quality of modern art and literature created perhaps the second view that the ancients and moderns should be considered equals, and that Shakespeare, for instance, is neither better nor worse than the great Greek dramatists, for in this field the peak achievement of the human race at all periods has much the same quality. The implication of this view is, of course, that once the full potential of any system has been realized, there can be no long-term trend in its achievement. It may go down from the peaks and return to them, but it cannot transcend them. We may argue that between the Greek dramatists and Shakespeare, there was a long trough, but if the full potential of dramatic and literary creation was realized in the Greeks, the most we can hope to do in the future is to equal them.

The third view, which grew out of the enormous dynamic and success of science, is that man continually transcends his previous achievements and that therefore the moderns exceed the ancients and indeed make them obsolete, so that the moderns include all that the ancients have to say and there is really no reason to read the ancients any more, except for purposes of historical study. Mathematics perhaps is the ideal type of this process. In order to learn mathematics there is really no need to go back to Euclid or to Newton or Leibnitz or Gauss, unless one is specifically interested in the history of mathematical thought. To become a practical mathematician all one needs to do is read the latest textbooks, which embody all that the ancients presumably had to say and usually in a form that is more easily understood. Here indeed we seem to have a cumulative process, even though historically and in particular places there may be certain ups and downs; within it, each present embodies, as it were, all that is really necessary of the past.

There is an implicit assumption in this, however, which is rather startling. It is that there is no need to study the failures of the past, simply because all that we have to learn is embodied in the present scriptures. What we have here, therefore, is a curious reversal of the scriptural approach. The reversal holds that the latest book on

the subject is, in fact, the scripture and all that went before it is really in the form of preliminary commentary, a Talmud, as it were, pointed towards future revelation.

Two possible concepts which may be of use in resolving this great debate of the ancients versus the moderns should be mentioned. The first of these is an old one, described by Robert Merton in his inimitable, more than half-serious spoof of scholarship, *On the Shoulders of Giants*,<sup>3</sup> as "Otsogery" (OTSOG for "on the shoulders of giants"). This is the idea that modern man can see further into reality and can achieve more because he stands on the shoulders of the ancients. Thus, the question of the relative intrinsic merit of the ancients versus the moderns is quietly shelved and we can pay all the respects to the ancients we like and still acknowledge that the moderns know more and see further. Merton, incidentally, traces this idea far back into the Middle Ages. It is implied indeed in Christian thought in the idea that the New Testament writers stand on the shoulders of the Old Testament prophets. There is a magnificent stained-glass window in the transept at Chartres which illustrates this point, but we find the same idea in secular writings regarding the achievements of the moderns versus the Greeks and the Romans in European literature. It would be interesting to see if this idea ever occurred to the Indians or the Chinese, for it is perhaps one of the key concepts which legitimated the rise of modern science.

Another concept important in this regard, which I must confess to having made up myself, although it seems so obvious that I can hardly believe that it has not been thought of before,<sup>4</sup> might be called the Principle of the Extended Present. Even in mathematics the present is not a single point in time, but is rather an historical range within which active communication is taking place. In any discipline we find controversy and interaction so that the present has to be defined by the period within which this interaction takes place, as indicated perhaps by the dates of the footnoted references. If the earliest reference in a piece of work, for instance, is to a date ten years ago, then we can suppose that ten years is about the length of its extended present, as this is the period within which intellectual action and

3. Robert K. Merton, *On the Shoulders of Giants* (New York, 1965).

4. This might almost be called the SNOLG, "sticking neck out like giraffe," principle, a companion to OTSOG.

reaction take place. An author whose work is commented on belongs to the extended present, even though he may in fact be dead or may have lived many years ago.

There is a certain difference, of course, between the interactions of living authors, which may be reciprocal, in the sense that A comments on B and B comments on A's comment on B and so on, and the interactions with dead authors, which in a certain sense can only be one-way. Adam Smith says something to me, but unfortunately I cannot say anything to Adam Smith. Even here, however, the dead author may exist as a present subject of debate, that is, A may say something about C, who is dead, and B may answer on C's behalf, saying that A was quite mistaken about C. In this sense, C is in some rather odd sense a part of the conversation, even though he is not participating in it directly.

The length of the extended present differs in different disciplines, and even from different periods, as fashions change. History, indeed, may be regarded as a continuously extended present—continuously extended, that is, into the past, so that the historical present may easily cover thousands of years. In mathematics and the physical sciences, the present may be a relatively short period of time, in the sense that the interaction is only with the world of nature as it exists at the moment, or with work that has been done in the very recent past.

Where then does economics fit into this spectrum of human activity? The question is not so easy to answer as might be thought at first glance, for it raises all sorts of difficult questions about the nature of economic knowledge, about the nature of the learning process in economics, and even perhaps about the teaching of economics. At one extreme we have the scriptural view, that the truths of economics were revealed through Adam Smith and Ricardo, or perhaps through Karl Marx, and that all we have to do now is to find out what these authors really meant. There is a touch of this in nineteenth-century attitudes towards Adam Smith and more than a touch of it in even some quite contemporary attitudes in various parts of the world towards Karl Marx. In Japan, especially, one finds talmudic Marxist scholars who pore over the sacred documents and interpret them page by page and line by line. The astonishing persistence of scripturalism in the world in many different forms indicates that it

has a real niche in the ecosystem and that it is one means of resolving uncertainty and establishing legitimacy. In economics, however, the extreme scriptural position is very rarely taken today, even by Marxists, although a strong residue of respect for the ancients may well continue.

At the other extreme we have what might be called the antihistorical school, summed up in the classic words of one economist, whose name I regret I have not been able to trace, that "he was not interested in the wrong opinions of dead men." This presumes that economics is like mathematics in that knowledge about it grows continuously and without loss, so that the moderns contain all that was in the ancients and then some; there is really no point in studying the ancients at all, and therefore, the later the textbook the better. My position, I must confess, occupies a wide Aristotelian mean between these two extremes. I have to confess also to a certain tendency to Otsogery, the belief that we do, in fact, stand on the shoulders of giants.

In terms of sheer human accomplishment, for instance, the achievement of Adam Smith, considering where he started from, is very remarkable. In a certain sense *The Wealth of Nations* is a scripture, simply because in that book economics took shape as a total body of ideas. A large amount of work in economics since then has, in fact, been talmudic, in the sense that it has clarified, expounded, expanded, mathematized, and translated into modern language, ideas which were essentially implicit in *The Wealth of Nations*. The whole of Walrasian, Marshallian, and Hicksian price theory, for instance, is clearly implicit in Adam Smith's concept of natural price, and in this respect one wonders whether any basic new ideas have been added to Adam Smith, in spite of all the elegance and the refinements which the years have brought.

Similarly, in the theory of economic development, one sometimes doubts whether all the modern refinements and mathematical models are much more than talmudic exercises on the fundamental insight of Adam Smith regarding the division of labor, the extent of the market, the impact of accumulation, and the effects of rising knowledge. In monetary theory and macroeconomics it must be confessed that Adam Smith's achievements look less impressive. Living as he did in an age of relative price stability and full employment, it is

hardly surprising that he did not appreciate the pathological deviations of which a monetary system is capable and which were really only revealed in the twentieth century. On this score, we clearly have to add Keynes to the classics, although even now Adam Smith's criticism of the liquidity-preference theory of interest at least can make one pause.

Ricardo's achievement is less impressive than Adam Smith's because Ricardo is very clearly standing on the shoulders of a giant. Nevertheless, as a model, particularly of the equilibrium of the price system, he does go beyond Adam Smith and his work represents what might almost be called an aesthetic achievement of remarkable quality. Ricardo, indeed, is Delphic enough to be an admirable subject for talmudic exposition. He did not have Adam Smith's remarkable facility in the English language, and whatever revelation he may have had in his mind comes through a heavy filter of inadequacy of verbal or mathematical expression.

Marx is in another category, simply because for a large part of the world, *Das Kapital* is a scripture, and hence the task of expounding and explaining its revelations is virtually endless. Capitalist economists may feel, of course, that this is a secondary stream or a diversion from the main development of economics. Nevertheless, it can hardly be denied that it is economics and that it is large in quantity.

The question of whether economists who are not primarily historians, but who are practicing their art, trade, science, or whatever it is, need to pay any attention to the classical economists or to any writers of the past depends on one's estimate of the extent to which the evolutionary potential of these past authors has been realized or exhausted. Everything which partakes, however modestly, in the character of scripture inevitably carries with it an element of revelation, which I define in secular terms as the creation of evolutionary potential. A revelation, in other words, whether in biology or in social systems, is an event or cluster of events which gives rise to a "phylum," that is, a tree of genetic change through time which goes back to the original revelation itself. In these terms there seems not the slightest doubt that Adam Smith represents revelation, for a large phylum of thought and intellectual development can be traced directly back to him. Social systems, furthermore, particularly after

the invention of writing, possess a property which biological systems do not: the phyla of social systems are capable of direct or genetic interaction with their originator.

Thus, in biological systems there is no possibility of the first vertebrate—whatever it was, it has long since disappeared—mating with one of its innumerable ultimate progeny. In social phyla, however, this is quite possible, simply because the original impulse is embodied in the genetic form of the scripture, which is capable of interacting at any time with the living representatives of the phylum. Thus, the Christian phylum has constantly been renewed and given additional evolutionary vitality because of the constant interaction between the Church and the Bible, the Bible representing, as it were, the original social mutation, or rather a record of that mutation, which produced the phylum in the first place. Similarly, it is not at all fanciful to think of economics as a phylum going back to Adam Smith, who in turn, of course, goes back to Newton and Descartes, and in which, again, the evolutionary impulse may be constantly renewed by “mating,” as it were, with the original source.

Thus, a book like *The Wealth of Nations* is “seminal” in almost the literal sense of the word, in that it can easily play the same role in the development of the phylum of economics in the minds of economists, as, shall we say, frozen semen from some distant ancestor which might be used to fertilize a living egg and so produce direct intervention from its original source into the course of the biological phylum. Works like *The Wealth of Nations*, therefore, are inevitably part of an extended present, which shows no signs of coming to an end, in the sense that one can still go back to Adam Smith even after many rereadings and find insights which one has never noticed before and which may have a marked impact on one’s own thought. Any writer who is capable of affecting the thought of people who are living and thinking after he is dead may be said to be seminal in this sense and also part of the extended present.

The principle seems to me pretty clear that as long as intellectual evolutionary potential remains yet undeveloped in the early writers, the modern writers are a complement rather than a substitute; that is, we need both Samuelson and Adam Smith. This may not be true, however, of all aspects of economics. If the evolutionary potential of an earlier writer is completely fulfilled in the later, then there is not

much point in devoting much time and attention to the earlier one, unless, of course, we are historians. In the accumulation of economic data and the development of statistical methodology we may very well be in an area where evolutionary potential tends to be realized right away, and hence the modern textbook is an almost complete substitute for the study of earlier writers. When it comes, however, to ideas, models, insights, all that which indeed makes the difference between the truly great writer and the mediocre one, we are operating in the field where the extended present is much longer and the modern writers are not substitutes for the earlier ones.

These considerations have considerable applications for the teaching of economics. Here again we find both theories and practices which differ very considerably and which go back to precisely the divergent views about epistemology that we have been outlining above.

At the one extreme there is the ultrahistorical approach which was characteristic, for instance, of the teaching of economics at the University of Edinburgh when I was there as an assistant in the middle thirties. Perhaps this was partly because one passed the tombs of Adam Smith and of David Hume as one walked up to the University, and in the presence of these sacred places, a scriptural approach to economics is hardly surprising. Nevertheless, I thought at the time that the results were little short of catastrophic. The student first learned what was wrong with Adam Smith and all the things in which he was wrong and confused, then he went on to learn what was the matter with Ricardo, then what was the matter with John Stuart Mill, and then what was the matter with Marshall. Many students never learned anything that was right at all, and I think emerged from the course with the impression that economics was a monumental collection of errors.

At the other extreme is the antihistorical school, which is now common in the United States, where the history of thought is regarded as a slightly depraved entertainment, fit only for people who really like medieval Latin, so that one can become a full-fledged, chartered Ph.D. economist without ever reading anything that was published more than ten years ago. If the ultrahistorical method leads to mystified and defeated students who simply abandon economics, the antihistorical method leads to the development of slick technicians who know how to use computers, run massive correlations



and regressions, but who do not really know which side of anybody's bread is buttered, who are incredibly ignorant of the details of economic institutions, who have no sense at all of the blood, sweat, and tears that have gone into the making of economics and very little sense of any reality which lies beyond their data. We seem to be producing a generation of economists now whose main preoccupation consists of analyzing data which they have not collected and who have no interest whatever in what might be called a data-reality function, that is, in what extent a set of data corresponds to any significant reality in the world. The antihistorical approach, furthermore, leads to a rejection of any information which cannot easily be fitted onto punched cards or their equivalents, and hence results in a distortion of the information input in the direction of that which can easily be quantified and away from those intangibles and imponderables which may nevertheless be an essential part of reality. The antihistorical school, furthermore, leads into what I have called *Ptolemaic* economics, that is, an endless modification of variables and equations in regions of strongly diminishing returns in the knowledge function, and still sharper diminishing returns in the significance function. We seem to be engaged in finding out more and more numbers which mean less and less, and the parallel with the Ptolemaic epicycles is not difficult to draw.

Here again there is surely a wide Aristotelian mean which includes both Samuelson, with the modern technical economics which he symbolizes and the application of this technical economics to the clearer understanding of what the classical economists are implying, but never quite saying, and also a reading of the past to develop some concepts of an extended present simply because past writers have things to say which no present writer is saying.

There is, of course, a case for history as such, and for the history of thought as such, simply on the grounds that it is interesting, that the record of the struggles and the errors through which man has progressed to a greater understanding of himself and of his world is itself an exciting story which can be enjoyed for its own sake, quite apart from any further utility. We can also argue, however, that the study of history has utility, in that one of the great purposes of formal education is to give the student a sense of an extended present and indeed an extended place beyond his own backyard and

his own immediate needs, emotions, and experiences. It is the great message of formal education that experience is a very bad teacher and that, especially as we come to deal with larger and more complex systems, as we do in society, we must develop an organized information input from a long historical present. It is a mark of intellectual poverty to know only one's own time and place.

One of the principal problems in learning indeed is how to destroy the illusions of perspective, the belief that faraway things are in fact small. We do this in the physical world through movement, which soon reveals to us that our own immediate view of the world, if taken literally, would be an illusion, and that far-off things only *seem* small. There is, of course, in social systems a perspective which is not wholly illusion, in the sense that the near are dear and the remote are irrelevant. The call for relevancy, however, cannot avoid the question, "Relevant for what, and for whom?" The society which produces people who have no sense of at least the partial illusion of time perspective is certainly headed for disaster.

Our approach to the seminal writers of the past, however, must be a little different from the conventional history-of-thought approach if we are really to bring them into our own extended present and to make them speak to us directly. The danger with the history-of-thought approach, as I have noted earlier, is that it lays the greatest stress on what was wrong with earlier writers rather than what was right with them. Furthermore, as history, it lays stress quite rightly on the time sequences, that is, who influenced whom and in what way, and also on the environmental connections, that is, how far the current environment, for instance, of Adam Smith or of the English classical economists, was responsible for the particular theories and views of the world which they produced. Both of these are entirely legitimate interests. There is a case, however, for an additional approach to the great writers of the past, which is to treat them quite directly as part of our extended present and study them from the point of view of what they have to say to us today, rather than from the point of view of what their place is in the historical record. I am not suggesting this as a substitute for the history-of-thought approach, but as a complement to it, and indeed as a complement to ordinary textbook teaching of economics.

I have taught for some years now a course called Great Books

of Economics. I am a little uneasy with the title, for there are overtones of undue reverence or bibliolatry in such an approach. Nevertheless, my experience has been that the study of, for instance, Adam Smith's *The Wealth of Nations*, Ricardo's *Principles of Political Economy and Taxation*, and Marx's *Capital*, at least in its condensed version, is of great and continuing interest both for the teacher and, one hopes, for the student. There are several benefits of such an approach. One is that the student gets a certain feeling for a peak achievement of the human mind. The great books are valuable because they give us some inkling of the way in which a really exceptional intellect works. Most of the things which students have to read in college are after all the product of minds, to put it gently, which are below the peaks of human experience. A student whose only acquaintance is with mediocre books and with mediocre minds has lost something of the sense of potentiality of the human organism, even though we may only dimly perceive what that potentiality is.

Another great advantage of studying the great books is that they expose the students to whole areas of thought which have become unfashionable and hence help him to transcend limitations which are imposed on him by the fashions of his own time. This is particularly true with *The Wealth of Nations*. Where, for instance, in modern economics is there a discussion of the impact of economic development on the relative price structure? Or where is there a theoretical discussion of the economics of jurisprudence or of religion or of education or imperialism, or all the other delightful things which Adam Smith discusses in Books IV and V? Reading Book V of *The Wealth of Nations* can indeed be a revelation to the student who has previously seen economics only in the narrowest terms of marginal analysis and commodity markets. Adam Smith may well be considered not merely the founder of economics as a scientific phylum, but even of social science in general.

One of the problems of a course of this kind is that the books which are read have to be reasonably self-contained and understandable without elaborate antecedents. Fortunately, this is true of *The Wealth of Nations*. Even though it would no doubt be helpful to have a thorough knowledge of the mercantilists, the polemic elements in *The Wealth of Nations* are in a sense peripheral, and Adam Smith's own account of the mercantilist doctrines, though biased, is at least

clear enough that the student can understand it. Having read Adam Smith, one can easily go on to Ricardo, who is not really intelligible without Adam Smith, and having read Ricardo one can go on to Marx, so that these three authors provide a remarkably self-contained body of reading.

Unfortunately, not all the great books are equally suitable from this point of view. One year, for instance, in this course we read Keynes's *General Theory*, which was a minor disaster; it simply cannot be understood at all without an extensive knowledge of nineteenth-century economics which the students did not have and which the teacher was hard put to supply.

There are, I am sure, many methods of teaching a course of this kind. One device which I have found particularly useful, however, is to distribute to the students in advance a set of comments and questions on the reading which they are doing. Unless a student is constantly asking himself questions as he reads, he is likely to miss the significance of what he is reading, especially if it is couched in such easy-flowing and delightful language as that of *The Wealth of Nations*, or even when he has to struggle with the crabbed English of Ricardo. The class periods can then be devoted to discussion of the questions which the students have already received and presumably thought about. It is possible, I think, for students who have never had any economics before to get a good deal out of a course of this kind, although, of course, it is very much easier for students who have already had Samuelson or some reasonable equivalent.

The place of the great books in formal education is by no means confined to economics, and this is indeed a very puzzling and important question as we struggle with the expansion of knowledge and the increasing difficulty of transmitting it to the next generation. I am frankly not in favor of a total "great books" approach, except in a few special cases and for exceptional students, simply on the grounds that it takes too much time and that economy in education is one of the most important problems we face. Insofar as the modern is a substitute for the ancient, the modern should be substituted, and there is a continued need for work on condensing the essentials of modern knowledge. Nevertheless, one can see a great many fields in which a limited "great books" approach of the kind I am recommending would be appropriate. In literature, of course, there is very

little else. Books about Shakespeare are no substitute for Shakespeare. In the other social sciences, there is a strong case for a modified great books approach, even when there aren't quite so many great books as there are in economics. Nevertheless, a political scientist who had never read Machiavelli or Locke or even John Stuart Mill is surely intellectually impoverished. Even in the biological sciences those who have never read, shall we say, D'Arcy Thompson's *On Growth and Form* or Lotka's *Elements of Mathematical Biology* or even Darwin are again in danger of becoming mere technicians. Even the mathematician's time might not be wholly wasted by reading Euclid. This balance between ancient and modern is hard to achieve and it obviously differs from field to field. Nevertheless, it remains one of the most interesting and important problems within the university curriculum.