
The Economics of Knowledge and the Knowledge of Economics

Author(s): Kenneth E. Boulding

Source: *The American Economic Review*, Mar. 1, 1966, Vol. 56, No. 1/2 (Mar. 1, 1966), pp. 1-13

Published by: American Economic Association

Stable URL: <https://www.jstor.org/stable/1821262>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



is collaborating with JSTOR to digitize, preserve and extend access to *The American Economic Review*

JSTOR

RICHARD T. ELY LECTURE
THE ECONOMICS OF KNOWLEDGE AND
THE KNOWLEDGE OF ECONOMICS

By KENNETH E. BOULDING
University of Michigan

What might be called, perhaps somewhat grandiloquently, the Epistemological Question has received rather scant attention at the hands of economists.¹ There are, of course, a number of epistemological questions, some of which lie more in the province of the philosopher than they do the economist or the social scientist. The one with which I am particularly concerned here is that of the role of knowledge in social systems, both as a product of the past and as a determinant of the future. There is a little terminological problem here, that the word “knowledge” in English has some tendency to approach the meaning of “truth.” We really have no convenient word to describe the content of the human mind without regard to the question as to whether this content corresponds to anything outside it. For this reason I have in the past used the term “image” to mean this cognitive content of the human mind.² But this term also is subject to misunderstanding, so for the purposes of this paper I will revert to the term “knowledge,” with a warning, however, that I make no assumptions about the content of people’s minds being true. We may recall the classic *bon mot* attributed to Will Rogers, that “the trouble isn’t what people don’t know; it’s what they do know that isn’t so.” So little accustomed are we to analyzing this problem that there is even an ambiguity in the word “ignorance.” It may mean that people have no image at all about something where an image is possible, or it may mean that they have images which are false or untrue. The pursuit of the question as to what we mean by truth or untruth, however, leads us into a philosophical morass from which, as David Hume suggested, the only escape is to climb out, clean oneself off, and go home and have a good dinner and forget all about philosophy. Otherwise we may be swallowed up in a paralyzing skepticism, and become, like Hamlet, “sicklied o’er with the pale cast of thought.”

¹Naming names is always a little invidious, but I must give honorable mention to F. A. Hayek, Fritz Machlup, T. E. Schultz, and Fred Harbison, as members of the little band who have taken this problem seriously.

²K. E. Boulding, *The Image: Knowledge in Life and Society* (Univ. of Michigan Press, 1956 and 1961).

I shall become very pragmatic at this point and consign the philosophical problems to my esteemed colleagues who make this their specialty, and I shall assume simply that knowledge, that is, images, exist; they can be observed or at least deduced through the instrument of language, combined with introspection; and that some images get us into more trouble than others; and that we tend to revise those images which get us into trouble. A decent, orderly, and at the same time imaginative and systematic revision of images that get us into trouble is a process which edges us, one hopes constantly, towards truth. This proposition, I must confess, is an act of faith. At its most sophisticated and orderly, this is the method of science. The same method, however, also produces images which approximate the truth in both what I would call folk knowledge, which is the knowledge gained in the ordinary living of daily life, and literary knowledge, which is folk knowledge chewed over, reflected upon, digested, and expanded by intakes from the written word.

I must resist the temptation to be philosophical, however, and come back to business; that is, economics. The question of what is economics can be almost as troublesome as what is knowledge? Here again I will be fairly ruthless and define economics as the study of the "econsphere" with a view of gaining knowledge about it, and I will go on to define the econosphere as that subset of the sociosphere, or the sphere of all human activity, relationships, and institutions, which is particularly characterized by the phenomenon of exchange. One might limit it further and consider only that part of the sphere of exchange which is subject, in A. C. Pigou's great phrase, to "the measuring rod of money." As I am a great believer in making boundaries of all kinds insignificant enough to be taken off the human agenda, in both the international system and in the republic of letters, I am not going to bother very much about where the boundary lies.

As it is exchange or potentiality of exchange or relevance to exchange that makes things commodities, one would think that economists would be interested in knowledge itself as a commodity. It is certainly something which is bought and sold. It is a little hard to put a price on it because of the difficulties of measuring the quantity of the commodity itself. We can put prices on the printed page, the hour's lecture, the newspaper, the tip sheet, or the newsletter and even perhaps on the golf course or the cocktail hour. The absence of any unit of knowledge itself, however, and perhaps the intrinsic heterogeneity of its substance, makes it very difficult to think of a price of knowledge as such, and indeed has probably contributed to a certain resistance which we feel to thinking of knowledge as a commodity. One longs, indeed, for a unit of knowledge, which perhaps might be called a "wit,"

analogous to the "bit" as used in information theory; but up to now at any rate no such practical unit has emerged. It is certainly tempting to think of knowledge as a capital stock of information, knowledge being to information what capital is to income, and to use the bit itself in the form of a stock as the measure of knowledge. Certainly the improbability of a structure, which is what the bit really measures, is highly related to the knowledge concept. The bit, however, abstracts completely from the content of either information or knowledge, and while it is enormously useful for telephone engineers, who have no interest in what is being said over their telephones, for purposes of the social system theorist we need a measure which takes account of significance and which would weight, for instance, the gossip of a teenager rather low and the communications over the hot line between Moscow and Washington rather high. Up to now we seem to have no way of doing this, short of a kind of qualitative guesswork, though even this will be better than nothing.

Another difficulty is that only things which are clearly capable of being appropriated are subject to being exchanged, and if a thing cannot be property, it obviously cannot be a commodity. While knowledge has many of the aspects of property, its capacity for reproduction in many minds and its accessibility in the form of the published word make it a very peculiar form of property. Thus as Major John Wesley Powell said to a congressional committee in 1886: "Possession of property is exclusive; possession of knowledge is not exclusive, for the knowledge which one man has may also be the possession of another."³ In spite of Major Powell's dictum, some knowledge, of course, is exclusive, such as trade secrets and patents, and thereby becomes property. What is perhaps even more important, knowledge which has the capacity of generating more knowledge in a single head is also exclusive and becomes property to the individual possessing it.

These difficulties may have led to a certain neglect of the commodity aspects of knowledge, even in economic theory itself. One notices this in at least three areas of economic thought: in the theory of the market, in the theory of development, and in the theory of decision making, both public and private. In the theory of the competitive market, there is usually made an explicit assumption about "perfect knowledge." What this means in effect is that the acquisition of knowledge of prices or exchange opportunities in a perfect market is costless, so that knowledge is, as it were, a free good. This assumption might be plausible if there were only a few buyers and sellers. However, the perfect market also assumes large numbers of buyers and sellers, and pre-

³ Quoted in Don K. Price, *The Scientific Estate*, p. 284, footnote 36 (Belknap-Harvard, 1965).

sumably large numbers of prices, and the more prices there are, the more transactions there are, clearly the less plausible becomes the assumption that knowledge is costless. We can perhaps wriggle our way out of this dilemma by supposing that the knowledge problem in perfect markets is taken care of by specialized arbitrageurs, who by devoting themselves full time to the problem of knowing what prices there are in different parts of the market and by taking advantage themselves of the price differentials thereby revealed, reduce these price differentials to so small a quantity that all the rest of the people in the market are justified in assuming that the price which they happen to observe at one point is characteristic of all transactions all over the market. From a social point of view, the income of the arbitrageurs might be regarded as the cost of acquiring the knowledge which is necessary to operate the market, and the other people in the market are evidently willing to pay this rather than become arbitrageurs themselves.

We can then think of the development of imperfect markets as a result of the fact that when commodities become extremely diverse and complicated, when we have to know not only their price but also their quality, arbitrage in effect breaks down, because the cost of acquiring the relevant knowledge is more than the market is willing to support. Hence we get imperfect markets facing both buyers and sellers, in which they face not merely a price at which they can buy and sell as much as they wish but a function relating the amount that can be bought or sold to the price at which it can be bought or sold. Once we have imperfect markets, however, the epistemological problem for the marketers themselves increases enormously. If prices are advertised in a perfect market, or "cried," every seller knows his sales function and every buyer knows his purchase function immediately. If, however, we have an imperfect market, the problem of knowing what are the sales or purchase functions becomes not only acute but almost insoluble, simply because in order to know a function we must have experience with a system beyond its present point. It is this failure to understand the epistemological problem involved which has vitiated much of the otherwise laudable attempt to expand the theory of perfect competition into imperfect markets. This attempt which began so hopefully in the 1930's now seems to have petered out in an epistemological swamp.

When it comes to the theory of economic development, the failure to recognize explicitly the essentially epistemological nature of the problem has led to a proliferation of mechanical models of very doubtful value, and, one fears, the giving of a large amount of bad advice. The theory of economic development is part of the general problem of evolutionary change, and its poor condition reflects the general poverty of

the theory of dynamic systems. Throughout the sciences, physical, biological, and social, we are still really more at home with equilibrium systems than we are with dynamic systems.

The plain fact is that knowledge or something equivalent to it in the form of improbable structures is the only thing that can grow or evolve, and the concept is quite crucial in any evolutionary theory. As far as matter and energy are concerned, we are subject to inexorable laws of conservation. Here we are faced with simple exchange: what one system acquires, another system must give up. In the case of available energy, there is not even conservation; the second law of thermodynamics informs us there is constant degradation and decay. From the point of view of energy alone, the universe is clearly running down into a very thin brown soup, and all processes in time are seen merely as the exhaustion of preexisting potential, a kind of squandering of available energy capital. It is only information and knowledge processes which in any sense get out from under the iron laws of conservation and decay, though they only do this, as it were, by operating at another level. Two processes may be distinguished here. The first might be called printing, in which a structure is able to reproduce itself by making a copy of itself out of the incoherent matter around it. The gene evidently operates in this way; the mass production of commodities is largely three-dimensional printing; and even the transmission of a good deal of knowledge by rote learning in the educational process falls into this category. Printing by itself, however, would never organize an evolutionary or developmental process. It would merely fill the whole universe with copies of an initial structure. There must therefore be a second process to which we might give the name of organizing. This is the kind of process, for instance, by which the coded information contained in the gene is able to organize a phenotype such as a man. This is the way in which a blueprint organizes the construction of a building. This is the way in which an idea creates an organization, or an image of the future governs an individual life.

We then see any developmental process, whether this is the development of a fertilized egg into a human being, the development of an idea into an organization by an entrepreneur, the development of a religion out of a "sacred history," or even the process of economic development itself, as essentially a combination of printing and organizing, the one developing rote knowledge, the other new knowledge. Thus we can think of capital essentially as knowledge imposed on the material world, in the first place by an organizing process which creates a producing organization and in the second case by a process akin to three-dimensional printing. In this view, consumption is essentially consumption of knowledge-structures, either human knowledge

through death or decay, or of the bodily structure through metabolic processes, or through wear and tear of material structures, or even through the disorganizing processes which afflict organizations. Production is then seen essentially as a process of increasing structure, repairing the decay and depreciation of consumption, replacing the knowledge lost by death, and so on. We could further think of production as having two functions: one a replacement function, which is necessary to restore an existing knowledge and capital structure; the other a developmental function which expands, improves, and reorganizes the structure of knowledge in general into new forms. If consumption is so great that all production has to be used for maintenance, there will, of course, be no development. We also get certain consumption processes which can be remedied by no known input, such as aging. Fortunately in society we have solved this problem by having babies, and in organizations we solve it by having competition, bankruptcy, and various forms of organizational death. Birth and death, indeed, are the price that we pay for aging, so that we can have a population that does not age, even though the individuals do.

The recognition that development, even economic development, is essentially a knowledge process has been slowly penetrating the minds of economists, but we are still too much obsessed by mechanical models, capital-income ratios, and even input-output tables, to the neglect of the study of the learning process which is the real key to development. It is true, of course, that what might be called the "human resources school" of Theodore Schultz and Fred Harbison has laid very proper stress on education as the mainspring of the developmental process. Even here, however, there has perhaps not been sufficient attention paid to the problem of learning as a whole, outside as well as inside the institutions of formal education; and there has been a considerable neglect of the role of the price system as a teacher.

It is always depressing to go back to Adam Smith, especially on economic development, as one realizes how little we have learned in nearly two hundred years. It is, however, perhaps worthy of notice that our father Adam saw very clearly that the learning process was the key to development, for if we examine his causes of the increase in the productive powers of labor, which is what we mean by economic development, we see that they all involve the knowledge process. The first of these, the development of skill and dexterity through the division of labor, is a learning process mainly in the lower nervous system. The second, the gains due to constant application at a single task and the elimination of "sauntering," involve the problem of forgetting and re-learning as we take up tasks intermittently; and the third, and by far the most important, is the development of machines (frozen knowl-

edge, as I would call them) as a result of the work not only of specialists in the production of such things, but also as the result of the work of “philosophers” who augment knowledge in general. Thus even before 1776 Adam Smith had perceived the enormous importance of what today we would call research and development in the processes by which everybody gets richer.

The third area of interest to economists where the epistemological problem is overwhelmingly important is in the area of decision making itself, in the private sector, in households and businesses, and in government; for the problem of government policy is just as much a problem in decision making as is the problem of the behavior of private persons and organizations. In my book, *The Image*, I have sketched what might be called an epistemological theory of behavior, pointing out that a decision is always a choice among alternative perceived images of the future. The study of decision, therefore, must concentrate on how these images of the future are derived from the information inputs of the past, as this is the only place from which they can come. That is, we have to think of our images of the future as essentially learned out of our inputs from the past, and the nature of this learning process is therefore of overwhelming importance. Similarly, the utility or welfare function, which we impose over these images of the future, is likewise learned, though economists have been surprisingly unwilling to recognize this fact, perhaps because it was called to their attention in such strident tones by Veblen, who argued most convincingly, to my mind, that if we wanted to have a dynamic economics, we could not simply take preferences for granted but had to regard them as essentially learned. The process by which we learn our preferences, however, is mysterious indeed. A substantial monkey wrench is thrown into dynamic economics by the fact that the price system itself may operate as a teacher, and preferences may change in response to the price structure just as the price structure changes in response to preferences. We have, for instance, what might be called the “sour grapes” principle—that what we cannot get we decide we do not like. There is also a counterprinciple that might be called the “Mount Everest” principle, that if something is hard to get, we want it, just because it is hard to get. Furthermore, if we know somebody else has paid a different price from what we have paid, our satisfaction may be correspondingly increased or diminished.

The epistemological theory of decision making is, of course, pretty empty unless we can specify ways in which the inputs of the past determine the present images of the future. Unfortunately, the observations of economists on this question are for the most part simple-minded to the point of embarrassment. The concept of elasticity of expecta-

tions, for instance, would only be interesting if there were any evidence at all that as a parameter it had some stability, or even that its rate of change had some stability. There may be some stability in expectations when there is nothing to expect, that is, in a poor, stable environment, but outside of this the evidence for any simple relationship between present rates of change and future is not well supported. Perhaps the most plausible theory is that people tend to interpret the present in terms of the traumatic experiences of their youth. Thus a generation that was traumatized by inflation will have different images from one traumatized by depression. It is clear we are on the borderline here between economics and psychology, and it is to the interstitial discipline of economic psychology that we must look for answers. The trouble is, of course, that even psychology knows very little about the human learning process, mainly because it takes place over such a long period and is almost certainly subject to phenomena such as "imprinting" in which inputs at certain moments of "readiness" in the development of the person produce effects which far outweigh their intrinsic importance.

Another profitable line of study lies in economic sociology, in the analysis of the way in which organizational structure affects the flow of information, hence affects the information input into the decision-maker, hence affects his image of the future and his decisions, even perhaps his value function. There is a great deal of evidence that almost all organizational structures tend to produce false images in the decision-maker, and that the larger and more authoritarian the organization, the better the chance that its top decision-makers will be operating in purely imaginary worlds. This perhaps is the most fundamental reason for supposing that there are ultimately diminishing returns to scale. In the most extreme form of this view, we can suppose that the role structure and communication network of an organization determine the inputs to each role so completely that there is virtually no freedom of decision at all, and that no matter who is the role occupant, the decisions will be much the same. The inference of this theory, of course, is that fools in high places will make just the same decisions as wise men, and though there is something comforting in this, one certainly hesitates to believe it too wholeheartedly.

Let me now focus my attention even more narrowly on the problem of the contribution of economic knowledge itself, that is, what economists know, to the processes of operation of the economic system. We have here a certain epistemological paradox, that where knowledge is an essential part of the system, knowledge about the system changes the system itself. This is a kind of generalized Heisenberg Principle, which is particularly troublesome in the social sciences. What this

means, of course, is not that knowledge is unattainable, but that we must regard it as part of a total dynamic system. That is to say, we are not simply acquiring knowledge about a static system which stays put, but acquiring knowledge about a whole dynamic process in which the acquisition of the knowledge itself is a part of the process. It is quite legitimate, therefore, to ask ourselves what is the impact of economic knowledge, that is, of the image of the economic system or econosphere, in the minds of professional economists, on the dynamic processes of the econosphere itself. The only point at which knowledge can affect a social system is through its impact on decisions. This impact can be small or large, depending on the relevance of the knowledge in question. Thus in the case of the operations of a market and the behavior involved in buying and selling, it is doubtful whether the knowledge of economics as such makes very much difference. Economists, for instance, have not been noted for their success in market speculation, with two notable exceptions of Ricardo and J. M. Keynes, and even in their cases, they made their major contributions to economics after, not before, they made fortunes in speculative markets. There are certainly few marketers who have been assisted in their operations by knowledge of the Walrasian Equations, just as few tennis players are much assisted by knowledge of the mathematics of moving balls.

At some points, however, economic knowledge is showing some danger of being useful. Economists can take a good deal of credit for the stabilization policies which have been followed in most Western countries since 1945 with considerable success. It is easy to generate a euphoric and self-congratulatory mood when one compares the twenty years after the first World War, 1919-39, with the twenty years after the second, 1945-65. The first twenty years were a total failure; the second twenty years, at least as far as economic policy is concerned, have been a modest success. We have not had any great depression; we have not had any serious financial collapse; and on the whole we have had much higher rates of development in most parts of the world than we had in the 1920's and 1930's, even though there are some conspicuous failures. Whether the unprecedented rates of economic growth of the last twenty years, for instance in Japan and Western Europe, can be attributed to economics, or whether they represent a combination of good luck in political decision making with the expanding impact of the natural and biological sciences on the economy, is something we might argue. I am inclined to attribute a good deal to good luck and noneconomic forces, but not all of it, and even if economics only contributed 10 percent, this would amount to a very handsome rate of return indeed, considering the very small amount of resources we have really put into economics.

Another point where the knowledge of economics has had some payoffs in the social system has been through the development of operations research and management science, with the aid of computer technology. Here again it is not altogether clear how much economics itself has contributed to this, as the basic ideas, for instance of maximizing something under constraints, are so obvious that it is almost embarrassing to credit economics with them, and it is the technology that has really made the difference. However, I suppose it can be argued that if economics had not beaten out the marginal analysis with an intellectual sledge hammer over a couple of generations, the computer boys might have had to spend a few minutes in thinking about what they were doing. Some of us, perhaps, still have to learn that arithmetic is a complement to, not a substitute for, thought, and that what my spy in IBM calls the "gigo principle" (that is, garbage in, garbage out) is a sound approach even to the most elegantly computerized simulation. I confess I am a little worried about one aspect of this movement, fruitful as it undoubtedly is. The very power of the computer to simulate complex systems by very high-speed arithmetic may prevent search for those simplified formulations which are the essence of progress in theory. I have an uneasy feeling, for instance, that if the computer had been around at the time of Copernicus, nobody would have ever bothered with him, because the computers could have handled the Ptolemaic epicycles with perfect ease.

The general movement towards the rationalization of decision-making processes in both private and public life through the use of optimizing procedures applied to complex masses of information may have some other costs lurking among the benefits, particularly in regard to political decision making. For one thing, these elaborate procedures may easily produce a sense of subjective certainty, which is quite unwarranted by the uncertainties of the actual system. One worries about this particularly in the international system, where the principle that "he who hesitates is saved" is usually very sound, and an illusion of certainty can be quite disastrous. The use of political war games and of computer simulation in the Department of Defense is a genuine cause for alarm on this score, and one would very much like to see some studies of the effect of gaming, for instance, on business behavior. It could easily be that the euphoria produced by these exercises resulted in some disastrous decisions, though I have not been able to document this hypothesis. The great danger of rationality is of course suboptimization; that is, finding and choosing the best position of part of the system which is not the best for the whole. Too many people, indeed, and especially too many experts, devote their lives to finding

the best way of doing something that should not be done at all. Decision making by instinct, gossip, visceral feeling, and political savvy may stand pretty low on the scale of total rationality, but it may have the virtue of being able to take in very large systems in a crude and vague way, whereas the rationalized processes can only take subsystems in their more exact fashion, and being rational about subsystems may be worse than being not very rational about the system as a whole. I would not argue, of course, that rationality about the system as a whole is impossible. On the other hand, the economist has a certain mind-set in favor of his own skills, and it is easy for him to leave out essential variables with which he is not familiar. Here, indeed, a little learning may be a dangerous thing, or even a little rationality.

One area where economists have a good deal to be humble about is in the field of economic development of the poor countries. In the rich countries we have done fairly well; in the poor countries our record is distinctly spotty. This is almost certainly because we are dealing in this case with a total social process, and the economic abstractions are simply not sufficient to deal with the problem. Here what we need is clearly economic anthropology, and this science, unfortunately, hardly exists. Our great gift to the world is national income statistics and the percentage rate of growth of GNP. In fact, as every economist knows, calculations of GNP, especially in the poor countries, are largely exercises in the statistical imagination, and even if they were accurate, the GNP itself can be a very poor measure of welfare. The GNP can rise because of arms races, because of stupid dam-building, or even through the building of presidential palaces. It can be rising because a small proportion of a population is getting better off while the vast majority remain in stagnant misery. Valuable as the GNP is, therefore, as a rough overall measure of economic success, it can easily become a fetish and a quite misleading statistic. Economists certainly should be the first to issue warnings against its misuse.

Let me conclude with some brief notes on the state of economic knowledge in the United States. At the moment I get the impression that economists in this country are bathed in a warm glow of self-congratulation, rising out of the long Kennedy-Johnson upswing and the successful tax cut, and they are all climbing onto the bandwagon of the Great Society, waving flags and tooting horns. That we have some causes for self-congratulation I would not deny, and I hate to seem like a skeleton at the feast. There is real danger, however, that our current euphoria will prevent us from seeing the immensity of our unsolved problems and the enormous intellectual task that still awaits us. It is not much to the credit of the economics profession, for instance,

that it took an engineer, Seymour Melman,⁴ to call our attention to the fact that our obsession with being a great power and our neurotic masculine compulsions about military strength are seriously depleting the technical resource base in the civilian sectors of the economy. The nonsense which is talked about cyberculture and the hooting and hollering about automation at a time when substantial segments of the economy are technologically stagnant or even deteriorating is another tribute to a major intellectual default on the part of the economics profession. The plain fact is that economists have neglected the study of technical change at the structural and micro level to the point where we are quite incapable of answering many of the most important questions of our day. We have been obsessed with macroeconomics, with piddling refinements in mathematical models, and with the monumentally unsuccessful exercise in welfare economics which has preoccupied a whole generation with a dead end, to the almost total neglect of some of the major problems of our day. Almost the only group of economists who have much sense of realism are the agricultural economists, and these are dealing with a vanishing sector that is now only 5 percent of the total economy. The whole economics profession, indeed, is an example of that monumental misallocation of intellectual resources which is one of the most striking phenomena of our times. It would be an interesting exercise to compare the distribution of economists specializing in different sectors of the economy with the contribution of these sectors to the GNP. I would not be surprised to find 75 percent of the economists are concentrated in 10 percent of the GNP. Where, for instance, are the economists who are really studying the service trades and the tertiary industries? Where are the economists who are really studying the 10 percent of the economy devoted to the space-military complex? Where are the economists even who are really studying the impact of automation? And the answer is, practically nowhere. Far from being in a mood of self-congratulation, we should be in a mood of repentance.

A mood of repentance, however, implies a hope of salvation. It is on this note that I would like to conclude. In almost every generation, the oldsters mourn that things are not what they were in their young days. I remember Hicks once telling me that he heard Foxwell's last lectures at London School of Economics, in which he commiserated with the young men of the 1920's that they lived in a dull age of economics, and that they could never hope to recapture the enormous thrills of the bi-metallism controversy. One is tempted to sing the same song today, in describing the Keynesian raptures of the 1930's. "Bliss was it in that dawn to be alive, but to be young was very heaven," as the aging

⁴ Seymour Melman, *Our Depleted Society* (Holt, Rinehart, and Winston, 1965).

Wordsworth wrote about the French Revolution. Little indeed did Foxwell know. It is tempting to say, "Those were the days," and leave it at that. But these are the days too. It may be, of course, that the intellectual fervor which in the 1930's we devoted to the problem of unemployment must now be devoted to the graver problem of human survival in an international system which has clearly broken down. It may be that intellectual excitement has shifted from economics towards political science or towards social psychology. Let us not think, however, that all our problems have been solved. An enormous intellectual task still awaits the economist. We are a very long way from writing *finis* to this chapter of the human enterprise. We still cannot handle some of the most elementary problems regarding economic development, economic dynamics, the function of the price system, the relative merits of centrally planned as against market economies, the economics of distribution, the development of the "grants economy," the behavior of economic organizations of all types, from the corporation to the foundation, the role of the price system in the developmental and learning process, the learning process itself by which we acquire our images of our economic environment. We are still, like Isaac Newton, only a boy playing on the seashore, and the great ocean of Truth still lies all undiscovered before us. That undiscovered ocean is Man himself. What we discover about him, I hope, will be for his healing. I did not become an economist for anybody's applause; I became an economist because I thought there was an intellectual task ahead, of desperate importance for the welfare and even the survival of mankind. A mere thirty-five years have not been long enough to change my motivation. Something has been accomplished; a great deal more remains to be done. To this unfinished task I commend us all.