RICHARD T. ELY LECTURE

Economics in Theory and Practice

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Do you not know, my son, with how little wisdom the world is governed?
Oxenstierna

Let's face it. Whatever economics was in the past, it is now virtually an industry. It stretches from the building of new models by the theorists to the supply of advice, forecasts, proposals, and programs by the practitioners, and caters mainly for a market of policymakers in business and government. In the economics business, market forces work feebly, particularly at the level of theory. The competitive process derives little benefit from price adjustments, and suppliers are often remote from the market and unaware of market pressures. But the usual phenomena of growth and development are all at work: investment, economies of scale, and the interaction between technical innovation and market expansion. Some of our colleagues confine their activities to production while others occupy themselves with the business of packaging and marketing. Division of labor has made rapid progress, both horizontally and vertically. On the one hand, we have specialists in different branches of economics: macroeconomics, industrial economics, transport economics, health economics, international economics, mathematical economics, etc., etc. On the other hand, we have a lengthening chain of intermediaries between the priestly who live in clouds of theory and the lay brethren in Washington, Whitehall, and elsewhere, who do battle in the corridors of power. Where so many labor, their efforts merit scrutiny as yet another branch of economics.

I do not propose today to embark on so ambitious a task as an exposition of the economics of economics. Having spent half my working life in a succession of government departments and international bodies, I thought it best to set myself a more modest task and draw on my own experience as an intermediary in the market for economic advice. I propose to limit myself to an examination of the links between theory and practice, between the theorists who seek to trap the inner secrets of the economy in their models and the practitioners who live in a world of action where time is precious, understanding is limited, nothing is certain, and noneconomic considerations are always important and often decisive.

Action can take two forms. It may go no further than policy recommendations, or it may consist in taking policy decisions. When I speak of practitioners I shall normally have in mind those who busy themselves with what the policy should be, whether professional economists or not, rather than those who take the final decisions on policy. But I may on occasion feel obliged to refer to the difficulties of the decision taker in making use of economic advice as opposed to those of his economic advisers in formulating it.

When one looks around, theory and practice are often far apart. In many countries there is even a physical separation: the theorists remain in their universities, the practitioners in their departments of government, with little contact between the two. And since ideas circulate most freely through personal contact, the physical segregation carries with it an intellectual segregation. The thinking of advisers on policy proceeds largely in isolation from the thinking of the academics. Even in countries where there is some circulation between universities and government, and some mixing of one set of

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economists with the other, there is a strong tendency for the thinking of each to stay within its own orbit, the insiders pursuing lines of thought independently of contributions from outside, and vice versa.

It is hardly surprising that there should be some divorce between theory and practice when their starting points are so different. As in medicine, engineering and other human activities, one can ask either: "what is the truth of the matter?" or: "what ought I to do?" according as one's interest is in theory or practice. An economist entering a business concern or a government department, unless consigned to the outer darkness of a research section, finds himself in an atmosphere where action takes precedence over intellectual speculation. The question at issue for the practitioner is always: "what is to be done?" That is a question which the pure theorist may decline to answer because he feels that he has no special competence to do so. He may share the view of Nassau Senior that "the conclusions of the economist, whatever their generality and truth, do not authorise him in adding a single syllable of advice."[1] But it is not a question that can be evaded; and presumably a training in economics is of some help in answering it.

How much help does theory provide? Sometimes the honest answer is "very little." It may elucidate, but certainly does not resolve, controversial issues of economic policy. An obvious example is the controversy in Britain in the early 1970's over the desirability of joining the Common Market, with half the academic economists signing a letter in favor, and the other half signing a letter against. Or one can point to the conflict of view between those who put their faith in monetary policy and those who regard it as a broken reed, or between the advocates and opponents of floating rates of exchange, or between those in favor of and those against a statutory incomes policy. Even when the theorists are in agreement, the issue of policy remains undecided. There is widespread agreement that in theory an expenditure tax is preferable to an income tax. But so far as I am aware, the Finance Ministries of the world have remained unmoved. There has been no rush to change over to an expenditure tax and the only countries which did, India and Sri Lanka, gave up the experiment almost at once.

The limitations of economic theory were brought home to me when I was asked to organize a course of instruction for senior administrators who had come to Washington for six months to learn as much as possible about the kind of economic policies their countries ought to pursue. They did not want to study economic theory as such, and had indeed no time in which to master it, but were interested in the practical upshot of economic thinking and speculation about economic development. They asked quite simple questions—some of them with a familiar ring—such as: "can inflation assist or does it retard economic development? How much can one safely borrow abroad? What tax system is most likely to favor economic development?" I found, as you might expect, that economic theory was indispensable for analyzing their problems, but that it very rarely allowed one to arrive at policy conclusions with any confidence.

Later I encountered a similar group who had come to study investment appraisal and had become well versed in the theory of discounted cash flow. But investment appraisal involves a lot more than economic theory. I asked the group what rate of interest they would use on their return home. There was a long pause until one bold spirit suggested "Bank Rate." Nobody contradicted him. Nobody had other suggestions to offer.

An earlier occasion on which I asked myself to what use I would be able to put my knowledge of economic theory was when I joined the British War Cabinet Secretariat in 1940. There could be no doubt of the profound influence on policy in wartime of a comparatively small group of professional economists. And yet I never saw much use made of the more refined and esoteric parts of economic theory. I concluded, as my colleague, the late Ely Devons put it, that "in so far as economic theory is useful in enabling us to understand the real world and in help-

[1]Quoted by John Jewkes (1953, p. 29).

ing us to take decisions on policy, it is the simple, most elementary and, in some ways, the most obvious propositions that matter" (1961, pp. 13–14). But, as he was careful to add, before the simple propositions become part of normal processes of thinking and cease to be "kept in a separate compartment labelled 'economic theory'," familiarity with the subject needs to advance well beyond the elementary level (pp. 25–26). Lionel Robbins said much the same when he argued that

> ...the most useful economic principles, when stated in their most general form, seem often mere banalities, almost an anti-climax after the formidable controversies amid which they have emerged. Yet experience seems to show that, without systematic training in the application of such platitudes, the most acute minds are liable to go astray.[2]

I found that two or three rather elementary economic concepts, which I had assumed would be familiar to everyone, were often not at all well understood by noneconomists but were of particular value in policy formulation. Among these concepts I should include as of first-rate importance the idea of the interaction of supply, demand, and price; the concept of opportunity cost; and the marginal theory of value. Later, I concluded that it was even more important to be able to think of market forces operating within an economic *system*, and to recognize the coordinating function of the price mechanism. Many other elementary concepts, particularly at the macro level, were equally fundamental, but these examples are enough for purposes of illustration.

Noneconomists have rarely sorted out in their mind how supply and demand operate on market prices and have no instinctive appreciation of the virtues—indeed the indispensability—of the price mechanism. On the contrary, their bias is almost always towards an organizational or political approach to economic problems. They like fixed prices because they seem to inject an element of stability and predictability. During and after World War II, when something became scarce the immediate reaction of business men or bureaucrats was nearly always in favor of control and rationing without any thought for the contribution that *some* rise in price might make to relieving or ending the shortage. The pricing of coal, for example, at the time of the nationalization of the industry in Britain in 1947, paid not the slightest regard to the chronic shortage of fuel and the danger that that shortage would arrest industrial recovery, as in the end it did. The pricing of foreign exchange, in much the same way, was divorced from market pressures and continued to be regarded by ministers as a moral or organizational issue: they believed that planning and control could do all that devaluation of the currency could do.

Of course, economists may fall into the opposite error and think that market forces, left to themselves, will always do the trick. At the end of World War II, when practically every country except the United States was running a balance of payments deficit, there were those who regarded the dollar shortage as an invention of governments that were determined to prolong the shortage by overvaluing their currencies. How far rates might have to fall and what the consequences of such a fall might be were matters rarely explored. In the early postwar years, with demobilization in progress and production well below capacity, it was not at all self-evident that a general realignment of currencies and a consequential revamping of the price structure would do much to restore balance of payments equilibrium, however necessary it might prove later on. On the contrary, there was good reason to take direct action to limit imports, encourage exports, develop alternative sources of supply and restrict the export of capital, that is, to make use of planning rather than prices.

Similarly, at the outbreak of war the necessary reallocation of manpower cannot easily be brought about by market forces alone. It might be possible in theory to work

[2] Quoted from an official wartime memorandum in my *Essays in Economic Management* (1971, p. 203).

through variations in the funds at the disposal of different departments and agencies, but if the government means to impose its priorities on the market it will achieve quicker and more predictable results by direct methods. Where a major upheaval is required, market forces operate slowly and blindly.

Opportunity cost is another concept that does not come naturally to the noneconomist. Few people have given thought to the inner meaning of "cost," or habitually decide on a course of action on the basis of the alternatives that might be adopted. Yet in my experience the concept is indispensable in policy analysis and lends itself to very wide applications. This is equally true of the idea of the margin: the average man thinks of averages rather than increments and often goes off on the wrong tack for this reason, particularly in relation to pricing and investment decisions.

Both concepts, however, need careful handling. Marginal theory is usually taught in terms of a single margin when in fact there are a great many. No businessman thinks of output and prices as his only variables, and even when he does, has to consider the repercussions of changing either of them over a whole series of time horizons. With opportunity cost there is a similar danger of neglecting the full range of possibilities. Lord Kaldor has recently used the concept to justify keeping open high-cost coal mines under conditions of heavy unemployment. But the logical conclusion of his line of argument is that so long as there is substantial unemployment, no firm should ever be allowed to close down and no one should ever be sacked, since it is better to have some output than none. The alternatives compared have to have regard to the full consequences, not just the immediate ones.

When I read the literature on shadow prices I have a rather similar reaction that the idea of opportunity cost can be carried too far. The notional prices corresponding to the opportunity cost of capital, labor, or foreign exchange may be enforceable on the limited sector of the economy under the government's control; but that introduces distortions between the controlled and uncontrolled sectors, which may thwart the government's intentions. Besides, the enforcement of shadow prices that diverge widely from market prices is far from easy, even within the controlled sector. Subordinate authorities are apt to take little notice of a hypothetical test rate of discount in deciding on their investment program and do their sums on the basis of the rate they have to pay on borrowed money, diluted by any subsidies from the central government. To make a shadow rate take effect throughout the public sector, the central government is unlikely to get very far by directives unsupported by offers of capital at the shadow rate.

The biggest single advantage that economists have is their way of thinking. It comes naturally to them to think in terms of alternatives and to trace the implications of alternative lines of action within the logical framework of an economic system. They are alive to the interaction of economic forces within that system and hence to the full economic impact of policy decisions. They are not at a loss, like Prime Minister Attlee, to understand how it is that when activity is so brisk at home there should be so much trouble with the balance of payments. They do not need to be persuaded like Lord Radcliffe—perhaps the most outstanding lawyer of his day—that an enquiry into the working of the monetary system may involve a study of the working of the capital market (though I must admit that there are professional economists who even now seem to share Lord Radcliffe's view).

The importance of an adequate framework of thought was strikingly illustrated in the controversy over central economic planning after World War II. Administrators and politicians alike tended to overlook the role of the price mechanism in their enthusiasm for planning. Two of the most outstanding figures of the period, Sir Oliver Franks and Sir Stafford Cripps—one a top administrator and later Ambassador in Washington, the other a memorable Labour Chancellor of the Exchequer—published expositions of the case for central planning without any hint that there are always powerful forces at work to close any gap between supplies and requirements and that it may be well to pay regard to these forces.[3] Few administrators or politicians, unless trained in economics, perceive that there can be no question of relying exclusively on government planning, or alternatively on the price mechanism, and that the real problem is always how to combine the two.

It can happen, as in wartime, that the price mechanism plays only a minor part because the government's priorities must take precedence over those of individual consumers; and in the wake of such circumstances the role of prices may be overlooked. It can also happen that economists are so mesmerized by the price mechanism that they limit their vision to the study of market forces when the phenomena of government planning merit equal attention. Just as administrators may fail to understand the workings of the price mechanism, so economists are apt to disregard organizational influences on economic activity. What goes on *inside* the firm, *inside* the government department, *inside* the Cabinet, is often left on one side. Yet it cannot make sense to pursue the study of market failure and undertake no systematic analysis of the weaknesses of alternative agencies of coordination.

To the four elementary economic concepts I have just discussed—supply and demand, opportunity costs, the margin and the economic system—I could add some familiar maxims such as "Bygones are forever bygones," or "There is no such thing as a free lunch." These, too, are very helpful in coping with muddled thinking in high places. They form a small but indispensable part of the economists' stock-in-trade. Where the full range of tools is most likely to be brought into play is in economic forecasting. Here indeed the practitioner has to keep in close touch with current theory. The relationship between theory and practice in economic forecasting raises many interesting questions, since those who prepare the forecasts and are perhaps best equipped to judge the risk of error may have little contact with those who use them and run their risks on the basis of the forecasts. But economic forecasting is much too large a subject for me to do more than touch on.

I turn instead to examine some of the reasons why economists find difficulty in bringing their theoretical apparatus to bear on practical problems. As Jacob Viner, who had plenty of experience, emphasized years ago, "the list of handicaps of the economic theorist as a participant in public policy...is discouragingly long" (1958, p. 109). Some of these handicaps arise from the practical difficulties that attend the use of economic theory in trying to work out an appropriate policy; others relate to the presentation of the policy so that it carries conviction and obtains support; others again derive from the need to marry economic with noneconomic considerations in making a policy acceptable. Let me take these in turn.

I. Limitations of Economic Theory

Economic theory is fundamentally an exploration of models and conceptual relationships couched in hypothetical terms and necessarily abstracts from many features of the real world. Without abstraction and simplification it would not be possible to begin thinking about economic problems. There is no option but to leave out what may seem to some people highly important. As Wicksell pointed out, it is not to be expected that economic theory should attach significance to the features of the real world according to their prominence in the eyes of the layman since "it is not the purpose of science to describe the obvious in elaborate terms" (1934, p. 19). But abstraction can be carried too far. The theorist may follow paths that lead him further and further from the real world and expose him to the danger of what one economist has called "theoretic blight" (E. R. Walker, 1943, p. 57). He may be tempted to select problems that lend themselves to sophisticated technical analysis rather than on grounds of practical importance; and become lost in admiration of the conceptual schemes he has developed without

[3] Sir Oliver Franks (1947); Sir Stafford Cripps' exposition appeared anonymously in the *Economic Survey for 1947* (Cmd 7046).

regard to the unrealistic premises on which they are constructed. He may also make the common mistake of getting things the wrong way round; or leave out what really does matter or can only be left out provisionally. He may then be deceived into thinking that he understands how things work when in fact the model is misconceived. Theory, as someone once put it, can be "an organized way of going wrong with confidence." To be a useful guide it has to separate correctly what is adventitious from what is truly significant.

Economic policy, on the other hand, has to deal with practical problems and specific situations. While it is possible to develop a branch of economics bearing on these problems and situations and call it applied economics, such a branch is still part of economic theory. It still consists of a set of logically consistent propositions and abstracts from many of the circumstances that may in practice govern the policy pursued. What is to be done is never a simple corollary of theoretical conclusions.

The need for care in drawing conclusions from theory was brought home to me in Berlin in the winter of 1945–46 when I took part in a discussion between Sir Paul Chambers (later Chairman of I.C.I.) and General William H. Draper (then Economic Adviser to General Clay). Sir Paul, challenged as to the accuracy with which he had been able to forecast budgetary revenue as Director of Statistics and Intelligence in the Inland Revenue, gave us a short exposition of the theory of probability. "If you toss a penny and it comes down tails ten times in succession," he said, "that doesn't affect the probability that it will come down heads next time. The chances remain fifty-fifty." "Shall we test that?" said General Draper, producing a penny. "Will you call?" Ten times Sir Paul called heads and each time the penny came down tails. Before tossing it again, General Draper revealed that the exercise of a little sleight of hand might be affecting the behavior of the penny. It is always necessary to enquire whether the assumptions of theory are valid in the case at hand before applying it; and if the facts do not conform to theoretical expectations it may be the facts that need looking into, not the theory.

Whatever the limitations of economic theory, it is very powerful stuff, more powerful the more general it comes. We certainly cannot dispense with it in trying to understand any economic system. If we enter a maze we need a thread to guide us in it and the purpose of theory is to furnish that guide. On the other hand, we cannot hope to get very far with theory alone and there are serious dangers in moving from the world of theory to the real world without regard to the difference between the two. One danger is that the theory may be obsolete. It isn't just the practical man who may become the slave of some defunct economist. Even professional economists, deeply immersed in their everyday duties in some government department, have to live on an intellectual capital that is rapidly depreciating and need an opportunity of rebuilding it in an academic environment. There may also be times when the boot is on the other foot and it is the practitioner who is alive to truths disregarded in current theory. Theory may suffer from a distortion of emphasis or a quirk of intellectual fashion that throws into prominence the wrong variables, the wrong problems or the wrong formulations of them; attention may then be diverted from the things with which theory should be occupying itself. When that happens, economic theory must be accounted not just irrelevant, but bad: for the primary purpose of theory is to assist us in posing questions, and if we are moved to ask the wrong questions theory has failed us.

The most serious problem for the practitioner is that the theorists differ, even on technical economic issues. There is no agreement on how the economy works—on what governs the level of output or employment or prices. Where the disagreements go so deep as they do nowadays it is difficult to speak with authority on technical economic issues. I need not dwell on the problems this creates in advising on policy.

And yet there are times when I wonder whether the disagreements between economic theorists, even now, go so deep as their solidarity when confronted with the heresies which so often shape the policies of governments. To take an extreme case, we may debate whether the money supply is too great or too small: but what of governments —and there have been some—that try to do away with money altogether or come to power, like the Social Credit party, preaching that there is never enough? Or, to come nearer home, what of the comment made to me on the Radcliffe Committee by the President of the National Union of Mineworkers, one of Arthur Scargill's predecessors: "You fellows seem to worry about what the rate of interest should do. But my members don't see why there should be a rate of interest at all." Or, still on the subject of interest rates, what are we to make of Chancellors of the Exchequer who exclaim like Hugh Dalton: "You can't allow higher interest rates while resisting higher wage rates." It can sometimes be easier to reach agreement between economists on what should be done than on matters of theory.

A further difficulty facing the practitioner relates not to theory but to economic information. Economic theory has always to be mixed with a large dollop of fact before prescriptions for action can be framed; but the facts are usually obscure, disputed, seen through different eyes against a different experience of life and stretching far beyond the limited economic context within which the economist seeks to analyze them.

The theorist moreover is in control of his starting point, since he is free to make his own assumptions; but the practitioner is never quite sure where he is. As Lord Roberthall, who was Economic Adviser to the British government for fourteen years, used to say: "it's very hard to forecast where you are now." Indeed, you don't even know where you *were*. The official statisticians are busy rewriting history from the word "go"; and they don't stop. When I look back at the British balance of payments deficits in the three years after World War II, for example, I find that the figures for the current account first published added up to £1245 m., were revised by 1953 to show a total of £740 m., and continued to be revised over the next thirty years until they dwindled to £585 m. Instead of working out at exactly the level assumed in the Washington Loan Negotiations in 1945, the cumulative deficit is now put at less than half and British capital exports over the period are consequently estimated at a total higher than was thought at the time by $\$2\frac{1}{2}$ b., that is, by two-thirds of what was borrowed from the United States. Another example is the way in which the U.K. monthly index of industrial production in 1964 was completely flat in the nine months up to September—a General Election was due in October—but was revised over the next two years so that it was sloping steeply upwards in official publications in 1966 and then was further revised until now it is flat again, as in 1964.

I cite these changes, which could easily be multiplied, to show that if the future is uncertain, so also is the past. I have often been intrigued to see how patiently economists apply themselves to explaining what, if later information is to be trusted, never occurred and how figures of assorted reliability are given equal treatment by those who do not live among them. The practitioner, recognizing the uncertainty of the information at his disposal, can have only a limited grasp of what is going on. He has to make the best of incomplete, inconsistent, and changeable data, relying on human judgment to derive a plausible, self-consistent picture of the existing situation. He is quite likely to find, as I have found, that the best way to reconcile the data is to begin by making a forecast of the future as a way of deciding on the underlying trends and then work backwards to a consequential interpretation of the present. The judgment he makes—as in the examples I have cited—may be crucial to the choice of policy. If for instance, you think the economy is stuck, you opt for policies very different from those appropriate to a rip-roaring expansion.

A further difficulty is that the economy never works in quite the same way for very long. You may feel confident that you can explain how it worked in the recent past and set your conclusions down in equations with all the coefficients, lags, etc., carefully estimated. But, as Keynes put it, human behavior is not "homogeneous through time."[4] Whether you realize it or not, you are always working with relationships that are obsolescent without knowing just how obsolescent they are. One day you can count on people spending more when prices go up; then you find them spending less. One day the unemployment figures go up when the vacancy figures come down; then they both go up together. It is always necessary to be on the look out for some departure from normal patterns and pay attention to straws in the wind. They may reveal, earlier than any statistics, new forces at work or a strengthening of existing forces. Analysis of these forces has to be coupled with a good eye for straws.

Then there is the limitation imposed by the need to be specific: in particular, to deal in specific magnitudes and at specific points in time. Many of the more important generalizations in economics make no reference to magnitudes or time. They may be of assistance to a government that wants to know in which direction it should be operating; but they do not, in their general form, offer much help to a government wanting to know how far to go.

For example, it may be possible on general grounds to indicate that the government should be thinking in terms of increasing taxation. But the question that has operational significance is, how much should the increase be? This requires immersion in a mass of statistical detail and the working out of far more definite views of the functioning of the economy than found their way into the traditional textbooks in economics some years ago.

Then there is the content of the tax package. What *taxes* should be increased? What effect will the increases have? What other action, if any, should accompany the increases in tax or be contemplated for introduction later?

Another set of issues relates to timing. When should the government act? When will it be possible to judge whether the action has been effective? Is it likely to be necessary to take further action later?

It takes time to become aware of changes in the situation, to size up the strength of the forces at work, to prepare the appropriate response. One cannot wait for certainty, but it is also a mistake to act prematurely when the diagnosis may prove to be quite wrong. Delay may be inescapable. After the devaluation of sterling in November 1967, there was a great burst of consumer spending and a clamor for early action to restrain it. The right time to act was of course in November, but when that opportunity was missed it was not easy, for technical reasons, to redeem the error by imposing additional taxation in the weeks immediately before Christmas. In January it seemed better to put all possible effort into a battle for lower government expenditure and by the end of the month the budget was already in sight only a few weeks away. So although the need for action was not in dispute, it was four months before a suitable package of measures could be introduced.

Another source of difficulty is that many of the questions on which advice is sought from economists have very little to do with conventional economics. Cabinet ministers, I found, don't ask the questions you are ready to answer. They want to know how people will react, both to events and to their policies. Will there be a strike or won't there? Will the rate of exchange weaken or strengthen? Will it be possible to get backing for this or that line of policy?

I concluded that attitudes were just as important as prices and that economic policy had to embrace efforts to change attitudes, not just efforts to make better use of market forces. Just as economic events and policies may have their biggest impact outside the functioning of the economy—as world depression could clear the way for Hitler—so of the most effective levers of economic policy sometimes bypass the market op- erate on confidence and opinion, expectations and attitudes. In the same way as economists so often neglect goodwill in discussions of industrial economics, so they tend to neglect the prestige, credit, standing,

[4]Keynes to Harrod, Collected Writings (1973, pp. 296–97), quoted by Bernard Corry (1978, pp. 5–6).

authority—call it what you will—of governments and the ways in which morale and endeavor are affected by factors other than pay.

II. Presentational Difficulties

Let me turn next to presentation. This raises problems at two levels, that of the theorist and that of the practitioner.

Theorists may confine themselves to the business of producing theories without much regard to the market for them. But in applying economics in practice, it is impossible to overlook the importance of the consumer. This is obviously true in the short-run sense that one has to have regard to the chances that any attention will be paid to suggested lines of action by those who have it in their power to act on them. It is true also, in a much wider sense: that those parts of economic theory that do not supply useful answers tend to receive little attention in business or government, while those that purport to throw light on practical problems, and point in the direction of specific ways of dealing with them, command respect and interest.

Practitioners face a rather different problem of presentation. Governments are almost as much concerned about what to say and how to say it as about what to do. Indeed, what they say may have more effect on the markets than what they do. They may be given credit for cutting public expenditure by simply announcing that that is their intention even when, as in the first four years of Mrs. Thatcher, it continues to increase. Similarly they may be given credit for mastering inflation when all they have done is to contribute to an international depression that brings down import prices. The public reacts to the declared aims of government as presented in speeches, often without close enquiry into the success with which these aims are pursued. This being so, economists can neither ignore how policies are presented nor how market opinion may narrow the scope for government action. Against the extra leverage that skillful presentation of policy may provide must be set the danger that the government may become the prisoner of market opinion, forced to conform to the role assigned to it by that opinion, and so transmuting into rational expectations what would otherwise have no rational foundation.

The issue of presentation is obviously highly important when any major change of policy takes place. If, for example, a more restrictive policy is proposed involving higher taxes, the Minister of Finance needs to see the case presented in persuasive terms so that the government, in turn, can be persuaded and the new policy defended in public debate. There is always a question how the higher taxes can be presented with the minimum damage to the credit and authority of the government and its capacity to carry through the rest of its program. What is to be said and how is it to be said? The handling and presentation of the decision is part of the decision itself and cannot be dismissed as irrelevant to it. It is partly because this is so that it becomes difficult to find a use for those parts of economic theory that are not easily translated into simple language.

Taxation provides many illustrations of the problem of presentation. I can remember Chief Festus of Nigeria recounting how he had to withdraw a tax on cosmetics because, as he explained, holding up a large, pudgy hand, "I burnt my fingers." In Britain the Selective Employment Tax introduced in 1965 was withdrawn six years later, in part at least because the refined economic logic by which it was justified did not make sense to the general public. Or take corporation tax. Economists might agree that there is no strong case in theory to have a corporation tax at all. But a proposal to abolish the tax would certainly be laughed out of court by politicians and would be unintelligible to the general public.

In stressing presentation and acceptability, I should not want to be interpreted as defending mere sycophancy and time-serving, automatic approval of any act of policy that is likely to gain popular approval and command a Parliamentary majority. Neither Parliament nor the public has any prerogative of wisdom in economic affairs, whatever democratic theory may imply, and the test of sound policy can never be made on acceptability alone. On the contrary, the economist is wise to be on his guard, as Marshall emphasized, when his views are popular and all men speak well of him (cited by Pigou, 1925, p. 89). He owes it to his profession to speak up for what he thinks right, to denounce policies that he thinks mistaken and to try to persuade those in power of the dangers they run if his advice is neglected. But if he wishes to be heard, he has to learn when to keep his peace and when to press his point. There are times when policies have to be ruled out because the political leadership required for their adoption simply does not exist; and when indeed the policies that seem right to the economist in his study might provoke adverse reactions, of which he has taken little or no account, but would make nonsense of the policies. There are other times when new ideas could fill a political vacuum, and what was previously unacceptable can be taken down from the shelf and put on sale.

In practice, political choices are rarely a matter of good and bad, black and white. They usually turn on a balance of considerations among which economic factors are not decisive. I don't know what undergraduates make of the questions they are asked to decide in three-quarters of an hour in final examinations. But if they have difficulty in coming to firm conclusions they are in good company. One can make a case—and generally quite a respectable case—for a variety of economic policies at any point in time and argument is unlikely to destroy every case but one and leave the surviving case as indisputably "right." Economists do notoriously disagree. So what they have to square with their conscience is usually not failure to demonstrate the error of some politician's ways but failure to offer the right degree of resistance, to do battle with the right degree of conviction, to use what Lord Roberthall once designated "the right tone of voice." Like the lawyer, the economist comes to see the case that can be made for and against, and loses the campaigning spirit with which he set out. He has to be forever pointing out that things are not quite so simple as politicians suppose, forever dwelling on the hidden snags. Policies cease to be right or wrong, but just better or worse, and often only marginally so. The occupational disease that he has to fight is not time serving but atrophy of conviction and the sense of commitment.

III. Noneconomic Factors in Economic Policy

I come next to the implications of the obvious fact that the policies of governments are by definition a political matter. If you are considering what governments should do, you can hardly avoid taking account of what sort of government you have, and how much government you want. It makes quite a difference whether you have been brought up to regard the government as Santa Claus, Stalin, or a dog fight. One government may be benevolent, another dictatorial, a third incapable of making up its mind. All of them have the failings of their human components, ministerial and bureaucratic.

Governments are political animals, moved by political considerations. They have to ask themselves what they *can* do and this may rule out many otherwise attractive lines of action. There are commitments by which they are bound—to other governments, to particular interests, to the party supporting them in office. They hesitate to fly in the face of prevalent attitudes and opinions. They are more conscious of immediate pressures and short-term considerations than of what is desirable in the long run and usually prefer to put off the evil day. Even when they are anxious to do the "right" thing, as a surprising number are, or when they give priority to long-term objectives over short, they tend to do so with an obstinacy fatal to their hopes: either because they lack understanding of the appropriate sticking-points, or because they hesitate to give ground for fear of unsettling opinion and losing the support they need. One of the most difficult problems in policymaking is to know how far to persist and when to bend. Overcommitment can be worse than opportunism.

In any event, the economist has to recognize that policy does not take shape in a vacuum but within a machine that has several well-defined organizational characteristics with which he would do well to become acquainted. Government is not a simple optimizing activity that can be reduced to a second differential in a mathematical equation. It is more likely to be a collection of bald-headed and somewhat bewildered men sitting round a table, harassed and short of time, full of doubts and dogmatism, with all the strengths and failings of successful politicians. Such men may survive for a long time without any policy at all except in the form of a series of specific responses to matters forced on their attention and calling for immediate decision.

If, therefore, the economist wants to influence policy and asks where policy is formed, the answer may be either anywhere or nowhere. It is not unknown for political theorists studying a government department to come to the conclusion that no intelligible answer can be given to the question: "who forms policy?" A succession of battles on a succession of issues may rage within or between departments, involving different groups at different times, and there may be no consistency in the outcome of their debates except what is imposed in ignorance by some later historian. Or decisions may be taken low down in the hierarchy by someone who is unaware that he has taken any decision at all (such as the decision to do nothing); and although the matter may be fought out at increasingly exalted levels until it reaches the Cabinet, ministers may have no option but to accept the inevitable, even if so little disposed to recognize their own impotence that they go through the charade of further debate and carefully minuted decision. It is one of the curiosities of government how frequently what is plainly due to the force of events is attributed to free and deliberate choice.

This is not to say that policy itself is a hallucination and not worth bothering about. What governments do can hardly be discussed in such a ludicrous fashion. The point is rather that one has to understand the scope for policy, the times at which it may be influenced, and the pressures that govern it. Similarly, one has to have some awareness of the bureaucratic atmosphere within which economic problems arise and have to be tackled. That atmosphere is somewhat different from the comparative calm of university life. Many years ago I described how "the various divisions in many government departments (were) loosely geared together, uncertain of the limits of their responsibilities, losing and gaining staff almost every week, themselves dissolving from time to time into new divisions or subdivisions, and facing an avalanche of fresh problems on which to advise, fresh cases to decide, and fresh policies to apply."

No doubt that exaggerates a little; but it brings out some of the features of life with Leviathan that an academic economist might overlook. These features condition the way in which economic theory impinges on policy and limit in particular the chances of drawing on highly complex bits of theory.

Allowance has to be made next for the political setting: the need, if one is in business, to guess what the government will do next, or, if one is in a government department, what is likely to prove feasible and acceptable to a government wishing to stay in office. A wise decision on what should be done cannot be based on economic reasoning or models that pay no regard to the distribution of political power, the frame of mind of the public, or the political ambitions and anxieties of the party in office.

Suppose, for example, that one thinks, like one of my distinguished Cambridge colleagues, that the economic situation calls for the use of import restrictions. One may begin by setting out the economic arguments. Then one has to reflect on the political situation. If on January 1, 1973, Britain has just joined the European Economic Community, one has to ask whether it makes sense to urge ministers *a week later* to introduce import restrictions that will fall heavily on imports from Common Market countries. If in June 1975 a referendum is to be held on continued membership of the Community and the Cabinet is split down the middle on the issue, one has again to ask if it makes sense to press the Chancellor, just ahead of the referendum, to budget in April for import restrictions, especially if the identical remedy was appropriate two years earlier in very different circumstances. If the advice is accepted and an international row brings on a run on the pound, how is the Chancellor to explain to the IMF that he acted in the interests of greater stability in the exchange rate, and how is he to put it to his continental colleagues—most of them struggling with heavier unemployment than Britain—that he felt compelled by the intolerable level of unemployment to set aside his treaty obligations.

It is not only the organizational and political setting that is important. Economic problems have also to be seen in their institutional setting. It is (or should be) impossible to discuss monetary policy without regard to the kind of banking system and methods of credit control in operation, just as it is or should be impossible to discuss wage theory without regard to the way in which wage bargains are struck and bringing in various kinds of legislation affecting bargaining power (for example, in relation to minimum wages, the powers and practices of trade unions and employers' associations, redundancy, labor mobility, and so on).

Frank Knight in his latter days used to agonize over the futility of being an economist. He doubted whether society would ever take advantage of anything he had to contribute to the solution of its problems. Others like Max Planck have turned away from economics because of its appalling complexity. Others again have given up in despair of arriving at finality: they are repelled by the inconclusiveness of the subject—what Wicksell called "the permanent state of war" (1958, p. 52) between diametrically opposed views neither of which is ever vanquished or disappears from the field as would happen with the natural sciences. There is no received body of doctrine—only a "technique of thinking."

In spite of what I have said about the limitations of economic theory as a guide to policy, the contribution it can make seems to me none the less invaluable. Any doubts on that score are soon quelled by life among noneconomists in positions of power. Moreover, the very inconclusiveness of economics has its value as a preparation for the world of affairs where the same inconclusiveness rules. In government and business there is rarely a conclusive answer; instead there is an equally enduring "state of war." The evidence on which an answer might be reached, even on matters of fact, tends also to be inconclusive since there is rarely any finality in the statistical data that purport to summarize the facts. It is necessary to decide between alternatives in the light of uncertain and often contradictory evidence. The decision, it is true, rarely turns exclusively on economic considerations. But it is a great advantage to be able to assess the force of these considerations, just as it is also a great advantage to be able to test the data with the kind of insight into the underlying relationships at work that economic theory engenders.

In the application of economics to practical problems, that kind of insight needs to be reinforced by imagination and accurate observation. Imagination is kindled by good theory but is powerless or mischievous if fed with inadequate or inaccurate information. In the social sciences there is no substitute for getting the facts right, and observation ranks at least as high as logic. Most theoreticians tend to treat far too lightly the difficulty of obtaining and presenting the information necessary to a sound decision. If you want to understand how the economy works, you need to have an eye for the information that matters; and since the unexpected keeps happening you need very up-to-date information. An economist like Keynes may owe his reputation to his originality as a theorist; but in my judgment he stands out from the other economists of his time at least as much for his flair in picking on significant statistics, often from relatively obscure sources before anybody else, and piecing them together by conjectural arithmetic to reveal a danger not then fully appreciated. Other economists of the first rank commonly have a similar power to startle with unfamiliar figures that give a new perspective to events.

Those who have done their homework thoroughly, and have mastered every scrap of information likely to be of assistance will be of little use, however, without the imagination to conceive of alternative policies and visualize the reasons why they may not work as expected. They may fail to make use of available information because they do not appreciate its relevance and overlook or misconstrue important relationships. For example, price control is obviously not enough by itself to remove the danger of inflation in wartime. But it required considerable imagination in World War II to invent three new devices for that purpose: postwar credits (an acceptable form of forced saving); points rationing (the circulation of a new currency to be used exclusively for the purchase of rationed goods); and subsidies to stabilize the prices of key commodities, making up a kind of iron ration. All these were expedients, not intended to last indefinitely, but they did contribute to a general stabilization of incomes and prices.

IV. Conclusions

It has been part of my theme that economics has more to offer by way of analysis than prescription. So it is hardly surprising that I should have few proposals for improving the state of affairs I have described. I have three rather modest suggestions.

The first can be put in a word: circulate. The practitioners need to mix with the theorists and vice versa. More than that—the practitioners need to be given a chance to catch up with theoretical developments by release from time to time from their duties. They should be offered sabbatical leave, or enabled to attend conferences or at the very least given time to read the journals. They also need encouragement and opportunities to make their own contributions to current theoretical controversy. Conversely, the academics need a modicum of experience of policy formulation. A spell in government or business can do wonders in changing the outlook of a theorist on the best way of spending his time, on the choice of problems to study, and on the limits within which action can be taken. In some countries, however, including my own, it has become more difficult to move in and out of government. Twenty years ago a remarkably high proportion of top British economists had had experience of service in government. Today there is very little circulation. That seems to me a step in the wrong direction.

Secondly I think we need to revalue and upgrade the work of intermediaries between the profession and the public. Financial journalism, for example, is an increasingly demanding skill and has become both more sophisticated and professional and more influential since the war. The press also carries articles by professional economists, and a number of specialized publications reprint (or commission) articles by them that help to illuminate current issues. But the mass media are largely untouched by this trend. It may be that nothing can be done about this. But there does seem to me great scope for those economists who have a gift for conveying the thinking of the profession, with all its doubts and dissensions, to the man in the street.

Finally, don't let us be overwhelmed by our disagreements: we have also plenty to agree about. As I have tried to show, it is often the most elementary propositions in economics, on which we all agree, that matter for practical purposes. Similarly, we should not underrate the value of the habits of mind that are nourished by economic analysis, even if they yield no common program of action. Where we continue to disagree, let us try to understand and narrow our differences, remembering always that we have a duty to our fellow citizens to offer them the best advice we can.

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