On Economic Knowledge

A Sceptical Miscellany

DM Bensusan-Butt

Australian National University
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PREFACE

I am grateful to old friends for the opportunity to collect in semi-permanent form a selection of occasional pieces mostly written for seminars or private circulation when I was their colleague in the Department of Economics in the Research School of Pacific Studies at The Australian National University. In the classification proposed in the second essay they had better be described as frivolous reading, though, jokes at the expense of my betters apart, they contain much that I seriously believe, and have sought elsewhere to expand more solemnly.

The Editors of the Economic Record must be thanked for permission to reprint the only two pieces previously published, numbers 1 and 5.

David M. Bensusan-Butt

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This little outburst is inspired by surprise on first reading that short elegant book, *Taxation in Australia: Agenda for Reform*, by Professors Downing, Arndt, Mathews and Mr Boxer (who, too, deserves a Chair). It is not meant very seriously.¹

Even those who, like the writer, have always, for one reason or another, avoided reading about taxation know that the existing revenue system in Australia (as in all other English-speaking countries) is a very peculiar affair. This our authors most clearly confirm. It has been built up by the accretion of innumerable Parliamentary Acts and judicial decisions. Thousands of pages are needed to describe it. It includes many hundreds of distinct and overlapping taxes and duties and one way or another touches every corner of our lives. Every year bits are put on, bits taken off, and the continuing bits patted about in one direction or the other. It is rather like some great medieval palace in the centre of a modern city, now long let out for offices and shops and flats, and tinkered with and added to and subtracted from by many generations of tenants of diverse tastes and interests. It is undoubtedly a most impressive pile, tolerated, with some affection and more grumbling, by the citizens who have grown up and will die in and around it, and it fascinates antiquarians.

But, one would have thought, it must be abomination in the nostrils of reformers. Their cry, one would have thought, would have been, 'Away with it!', and, one would have thought

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¹It was intended as a private offering to the four authors, and its date (1 April 1964) must excuse its style.
they would be all ready with blue prints of something new, gleaming, simple, to put in its place, as the central feature of the modern State going up all around. They would be all girded up, one would have thought, for furious combat with conservatives, antiquarians and the merely tolerant who would resist their iconoclastic zeal and visionary excitement. So when this delegation of four large famous men bears down upon us, under the banner of the Social Science Research Council, with, in their hands, an Agenda for Reform, 'Now', one thinks, 'we are for it'.

What a mistake! They turn out to be a party of the mildest of antiquarians, and their offering a charming pastiche of an Olde Englysshe official report. There is not an ounce of dynamite among them. Twice they say 'Old taxes are good taxes', and they are overwhelmingly convinced of the inconvenience of large-scale demolitions. They reverence the old place dearly and accept without question almost every means and every end of the wise old ancestors who built it. Bits of it now stink, they agree, and ever so gingerly they propose to insinuate some inconspicuous drains. In other parts some ill-considered modern 'improvements' have been made: let the old design be restored. On some other old buildings elsewhere in the Western World there are elaborate finials and crockets ours has not got (net worth taxes, for example): if they have stayed up long enough there, let us add replicas to ours here.

To have Bentham announced and Burke led on; to be promised Lolita and given a reading from the Golden Bowl; to be warned of a bomb and handed a currant bun - these upset one's calm. Let us, therefore, abjure that cautious respect for established opinion which seems to have infected our reformers, and see instead whether some more inflammatory agenda than theirs can be teased out of their lucid account of the status quo if one chooses to be more radical than they on a number of the main issues they review.

II

Taxation rather than expenditure is the subject for reform but the two get much mixed up, and there are some points about the latter which might be made first.

First, a matter of presentation. Most people are liable to direct taxation and a lot of people get subsidies because
of some peculiarity in their situation. Radicals, to whom clarity is an end in itself, believe that the two should not be confused. The Four Wise Men seem to agree. They take strong exception to tax relief as a mode of subsidising particular forms of financial investment (mining, prospecting, oil exploration, etc.) (Paras.391-3): 'Such subsidies', they firmly say, 'should be granted directly and openly'. But these are the only kinds of disguised subsidy they dislike, presumably because the others are old. Radicals, however, go the whole hog and believe that the existing income tax should be stated gross, and every justified subsidy to wives, children, school bills, savings, and all the rest, given openly as distinct subsidies for all to see. Even though administratively it may prove neatest to settle the balance in a single payment or receipt - an annual plus or minus from the citizen's direct transactions with the State - the elements in the balance must be made quite plain.

III

But our radical will go much further than just that. He will take a far closer look with a much less reverent eye at the justification of the main categories of existing or proposed subsidy than our Four Traditionalists, and he will be a little outraged by the placidity with which they eventually suppress their academic doubts and accept the standard arguments recorded in, especially, their Chapter XIII.

1 In dealing with subsidies to dependants he will distinguish between wives and children. He will not subsidise wives on the grounds of 'the simple fact that, in the case of a family man, several persons have to live on one income' (Para.407).

(a) Single persons need to be cooked for and have their homes tended exactly as much or as little as married men, and the fact that the wife is, and the charwoman is not, paid in kind is an irrelevance.

(b) A lot of wives do not live on their husbands' incomes, and none need to, unless they are tending children (in which case it is the children who will - or will not - warrant special treatment for the father).
(c) In any event marriage is a voluntary act taken, one hopes, with a full appreciation of its economic and demographic threats. A subsidy to wives is only justifiable on the grounds that without it not enough of the population would be in a state of matrimony. Radicals do not fear this danger and would cut this subsidy right out now.

2 Similarly a radical will only accept a subsidy to children (as distinct from subsidies to education) so long as there is a definite social judgment that parents would not, without it, perform the voluntary act of their creation sufficiently often. In addition, since to have one or two children probably does not, at present real income levels, impose any economic hardship on normal parents commensurate with the putative pleasures of a patter of tiny feet, he would reserve the subsidy to the third and later children. (Even so he will wonder whether it is not altogether cheaper to confine the stimulus to population to financing the immigration of skilled migrants of marriageable age: they start work sooner, you get their babies soon enough at no cost, and you leave the costs of the education of their parents to the foreigners.)

3 Radicals will have none of the Byzantine confusions of the existing arrangements to subsidise some savings, or of the Four Wise Men's even more complicated tinkering with them. All this starts:

(a) from taxing both the income out of which savings are made and the return on the savings, and then trying to undo some of the consequences, and

(b) from a belief (only plausible when tax complications reach the level of total incomprehensibility) that people cannot make rational provision for their own old age. In the radical's reform there is:

(i) A flat subsidy to old age, financed from general revenue, a non-contributory old-age pension at, say, half the average wage.

(ii) No subsidy to saving.

(iii) No tax on investment income.
At least this system can be understood by those who are not actuaries. The distributional implications belong to tax policy and should not frighten us off.

**IV**

These reforms would on balance save some taxation, but their main attraction to radicals is that they save confusion and complexity. A much bolder adjustment on the expenditure side is suggested by the Wise Men's staggering revelations about the extent (nearly 90 per cent) to which Government investment has recently been financed from current surplus. It seems that something like 25-30 per cent of taxation has been going this way. Possibly it struck the Wise Men that the rational way of financing public investment was to pay interest and not principal out of public funds, and that this forced saving, so largely concealed from the ordinary citizen, is an imposition on his liberties and freedom of choice. They devote two paragraphs (174-5) to the point. There they 'completely reject' the idea of relying on voluntary lending on the simple grounds that some of the remitted taxes might - Oh horror! - be spent on consumption. But, replies the real radical, if the present rate of public investment is demonstrably right in terms of marginal social return, it could be maintained, justifiably, by raising the rate of interest on loans to Government to whatever level proved necessary; and if it is excessive the switch to consumption is positively desirable.¹

Here then is a large reform in the finance of expenditure radicals may at once include in their alternative agenda, and one with important consequences to the tax structure.

**V**

One of the most striking things about this book is that beyond Chapter I indirect taxes barely get a mention (save

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¹If a surplus is required for 'Keynesian' reasons that of course is another matter, but even such a surplus can be collected either on current or on loan account.
for a chapter on the taxation of companies as a branch of income tax). Indeed indirect taxes are the only part of the old structure which our Four Preservationists really seem to dislike. If the major theme of their numerous recommendations could be summed up in one sentence it is this: that 'we favour a substantial move over the next decade in the direction of increasing the relative importance of personal income tax in total tax revenue' (Para.427). That tax 'is the core of the tax structure of advanced western countries', the 'only type of tax widely thought capable of satisfying the criterion of equity'. Alas that, in this benighted country, 'it now accounts for less than one-third of total tax revenues'. 'International comparisons suggest that Australia is relying unduly heavily on indirect taxes.' It is with almost audible regret that they say, 'for various reasons considerable revenue will continue to be raised from estate duties, company income and a wide variety of indirect and commodity taxes'.

This is at first sight surprising. After all, the opening sentence of the whole volume asserts that 'income tax weighs heavily on everyone in Australia'. And in the sense that it involves the citizen in more paper work, more form-filling, more time spent in constructing accounts, more temptation to lying, more uncertainty and argument and guilt and worry than all the rest of the taxes put together, this is plainly true. The great halls and aisles and transepts and oubliettes and secret passages in which the manifold mysteries of income tax are piled up are the most desperately Gothick parts of the whole structure. They cost far more in maintenance and their drains go much more often wrong than the good old Norman which houses, with functional simplicity, the indirect taxes of which no one much complains.

Thus the sceptical radical must be somewhat astonished when the Four Reformers wish to enlarge and elaborate this mess, and, still more, when they propose to erect, as a succursal, a net worth tax which will set a new standard for architectural fuss, without yielding noticeable cash.

Why? Why? One reason seems to lie in an urge for international conformity: our income tax, now for all its faults much the smoothest working of them all, ought to be as nasty as those of the U.S.A. or England. It is just not nice for Australians to do better than 'advanced western countries'.

But there is a second argument, more fit for discussion. Income tax and the proposed net worth tax can be progressive in a way no other taxes discussed in this book can be, and the tax system must still have, as one of its major continuing objectives, the gradual and steady reduction of inequalities in the distribution of income. Our Four Social Scientists are quite obsessed with the inequality of incomes, and indeed almost boast about it in their Preface. They do not describe its present extent, or examine its past trend, or forecast its future. To them it is an 'axiom', not even a 'value judgment', that, whatever it is, it should be reduced: and anybody questioning this is 'irresponsible' (page v).

Now radicals are used to doubting the axioms of sound men, and even more used to being called irresponsible. They are provoked to ask themselves and anyone who will still admit the possibility of questioning:

1 Should the further reduction of inequality still be a dominant aim of policy?

2 Does personal income tax serve that end with an efficiency that excuses its uniquely troublesome character?

3 Would any other combination of taxes do better?

VI

In Victorian England, when greater equality became a prime aim of radical policy, vast hordes of underfed poor shivered in slums while the rich lived it up in palaces, and even the middle classes lacked nothing in space, warmth, food, drink and service. Besides these unspeakable economic contrasts there was ugly social injustice: the Classes believed themselves very superior persons and without compunction looked it and said so in the sight and hearing of the Masses.

Neither of these horrors exists here today, save in the bookish imagination of the doctrinaire Left or the memories of the elderly. Does any Australian under forty now seriously feel himself insulted, socially or economically, by another's higher income? Does any object to that income for any reason other than that it may be earned in some spivish way or simply inherited? Is not the normal citizen
entirely tolerant of big fortunes earned by a man's own hard work or exceptional ability or sheer luck?

This radical is ready to scrap attitudes his parents rightly held seventy years ago if the world has changed in the interim. He will cheerfully rely on the spread of education, the rise in productivity, the secular decline in the rate of profit, the vigour of competition, and legal penalties against restrictive practices to continue the trend away from the gross and offensive disparities of a receding past. For him the residual task of the tax system in this field is that of preventing the inheritance of large fortunes, a job for the death duties that our Four Reformers never trouble to discuss.

This, of course, is only a personal opinion, just as the Four Wise Men (before they got on their Prefatory high horses) recognise that theirs are too. Like them, 'we realise that our views are not universally held but' - like them - 'we believe that they have considerable support'.

VII

But a radical, prejudiced against income tax because it is a nuisance, need not confine himself to questioning the importance of the peculiar purpose it serves, that of reducing income inequality: he can question whether, even if the purpose be a good one, it serves it well.

Now our Four do, it is true, devote much their longest chapter to avoidance and evasion, and perhaps they are so unusually good at stopping up loopholes and setting traps for rats that their advice if taken would drive more income into the tax-gatherers' nets. But their analysis stops there, and that, to a radical, is not the end of the matter. Levels of gross income having somehow got themselves determined (in a market of some sort one presumes) are not then uninfluenced in any way by their subsequent taxation (except through the incentive to work). Reformers must take a view on the difficult question whether the distribution of gross income from personal exertion in a fully employed dynamic society does or does not to any extent adjust itself to maintain relativities in real or net income. After all, on the answer depends the efficiency of income tax as a weapon of equality.
To this innocent it seems probable that over a wide range of top jobs men can demand and receive compensation for tax rises in the form of higher gross incomes - whether because they are in tight professional cliques, or earn much less than their 'work value' to the companies that employ them, or can tighten their monopoly or oligopoly screws. So long as marginal tax rates are less than 100 per cent - and our Reformers are content with 66 per cent - it seems doubtful whether progressive taxation in fact much affects the interpersonal distribution of earned disposable income. If scarce and important persons demand twice the real incomes of less scarce and less important persons they can, in the less competitive corners of our society, get them.

The 'repercussion' effects of the progressivity of income tax are, no doubt, difficult to analyse and these judgments may be wrong. But there is no escape from considering these effects: merely to assume them nil is arbitrary. (There is a tone of helplessness, verging on obscurantism, in paragraphs 97-9 about the incidence of taxation.)

Progressive taxes can certainly soak those who have already retired when they are imposed or strengthened in an unforeseen manner, and they can bite on the idle younger rentier. But must the mountains labour for these rather trifling little mice?

VIII

If there is anything in these destructive glosses on the Four Reformers' account of what is and what ought to be, we reach the conclusions (a) that something like a third of our revenues should not be raised to be spent in the way they are (on capital), and (b) that something like a third of them (the direct third) do not successfully serve even the special end of distributive equality for which, with such appalling elaboration, they are raised. It follows, in a blinding flash, that so far from extending direct taxes we should be able to abolish them. We can after all blow all that Gothick up!

The system to which we should work - and with which (why not?) we can lead the way - is one which combines prime reliance on indirect taxes of a horizontally equitable kind
with a secondary dependence on death duties to prevent excessive inequality from inherited wealth. Under such a system the taxpayer could use every penny of his income as he pleases. He would pay nothing to the State directly. He would only fill up forms to claim subsidies. He would never meet the tax-gatherers in his life, only his executors would meet them. The economy in sheer fuss and bother would be very wonderful.

That estate duties are difficult to administer is admitted: but they are administered now, and such a scheme as this would release hundreds of officers to help. Nor does there seem any difficulty in indirect taxes - whether purchase taxes or turnover taxes or excises - which would be new to this scheme or nearly as intractable or vexatious to nearly so many people as the minutiae of the direct taxes our Four Reformers chew over for so many pages. One may guess that avoidance and evasion would be immensely reduced.

But, of course, there is the transition. The simple abolition of progressive direct taxes on income in a situation in which the spread of gross incomes has for many years been stretched out under the influence of those taxes themselves would produce a sudden and violent distortion of income in the admittedly wrong direction. Thus the price of entering this Brave New World is a once-for-all readjustment of gross incomes to match the net incomes now enjoyed. The operation would tax the ingenuity of all the legislators and all the arbitrators who would have to put it through. The destruction of our crumbling Bastille would make a frightful row and cause clouds of dust. But would they not be worth it?
I do not know whether Professor Gershenkron really said that 'no man can read more than 5,000 books in his life'. But hearing this quoted when I was already middle-aged, I was depressed and have been haunted ever since by a gloomy sense of the waste and failure of my own disorganised course of reading. To exorcise my sorrow I attempt in what follows to turn my regrets to some constructive use, to provoke others, who still have time, to think about the implications of this remark.

Plainly it is, approximately, true. Most literate men and women engaged in professional or academic work can hope to read for around fifty years, and, if reasonably assiduous, can average around two books a week with a fortnight off yearly. If we include newspapers and weekly and quarterly journals at their proportionate lengths, 5000 seems as good a figure as any for average readers of this class. Let us take it as our starting point.

What a horrible figure it is! What a tiny fraction it must be of the good and interesting and amusing and profitable books in existence! Dear reader, stand at the doors of any decent well-chosen library, and brood upon the hard, unbreakable and unevadable fact, that, ahead of you - however young you are, however keen - there stand ten, twenty, a hundred or a thousand times more than you can get through in your little scramble from the cradle to the grave. And you know, do you not, that however active and sociable you be, however many intelligent and expressive people you live among, there lie on those shelves great stores of delightful and stimulating experience of kinds to which reading alone will give you access. You will die with most of it unexplored, in consequence missing much joy yourself and giving much less than you might have done to your neighbours and descendants.
The problems of choice to which this scarcity of time and plethora of books give rise are of course quite general. Though doubtless varying in detail for different kinds of people in different times and places, they apply to all who can read and write. To bring them into focus let us consider the case of an intelligent young student of economics who has reasonable hopes, and the curious ambition of becoming a professional academic economist. He has heard this horrible remark and demands two things of an elder. The first is - not of course a reading list but - a suggestion of some possible principles upon which his own planning of his own reading might be conducted. He has no intention of taking these principles on trust but he wants something to start thinking about before he undertakes, for himself, the painful task of planning how best to economise. Second, it has also occurred to him that if there is so much too much to read there is also some question whether his own ambition of publishing his own prose in due course is quite so obviously public-spirited as he had hitherto assumed, and he would like some ideas about this too. Let me wrestle with these two large issues in turn.

II

It is natural and proper among economists to regard the problem as one of equilibrium in a multisectoral system. What the young economist wants to find is a list of books such that having read them and expired and having then, in another place, become perfectly informed about what he has missed, he will conclude that he could have done no better by reading any others. In composing his list he will wish to categorise literature and select only the 'right' relative number in each sector. He will also of course have to get the 'right' books in each sector, and what is more, since the whole problem is dynamic, find the right order in which to read them, and a little will have to be said about these difficult topics too.

As the first over-riding subdivision of the ocean of print let us distinguish between Frivolous and Serious reading, and include in the former not merely detective stories, science-fiction and the like but any casual inspection of newspapers and magazines which we undertake simply because the stuff is lying around and catches our eyes when we are not ready to concentrate. The young economist will be a prig if he allots less than (say) 1000
to frivolous reading and for argument's sake we may advise him to keep that to a maximum. That leaves 4000 for serious reading.

Here a prime distinction can be made between General and Professional reading, between books that are not explicitly about economics at all (however much relevant material may creep in unobserved) and those which are about it explicitly (or, like textbooks of mathematics and logic, are a necessary preliminary to serious economics). The proper allocation here is, I think, the most difficult of any of the allocations we have to discuss for it involves what can only be called moral considerations as well as technical questions.

To isolate the moral issue, suppose, temporarily and absurdly, that Professional reading added nothing to the civilisation and (vile word) culture of the reader, and that General reading was professionally useless. Then the division between the two would depend upon the relative valuations we attach to being civilised and being economists. The fanatical worshipper of the science, believing in the supreme value of economics either as an end in itself or as a social necessity, would bar the young economist from any general reading; another moralist, extreme in the opposite direction, prepared to leave the amount of economics produced to the market, and regarding civilisation as the ultimate end of that part of life allotted to reading, would reduce the contemplation of professional prose to the minimum required for the earning of one's income. Between these poles there would be many intermediate positions.

The moral issue, in the abstract, is unchanged when we admit that, technically speaking, some general literature is such as to contribute to professional competence, and that some professional economic writing has quite a civilising influence. The chosen solution of the moral question is then, however, overlaid by the questions of the actual extent of these dividends of economics from Paradise Lost, and of culture from the Review of Economic Studies - questions about which there may be much disagreement. Those who believe that economic theory consists wholly in the construction of imaginary worlds in rigorous mathematical language and applied economics wholly in the mathematical analysis of official statistics may perhaps gain some stimulus from reading Newton's Principia but little other non-economic writing will seem to them of much professional value. Others,
however, who see economics as about human beings as they live and have lived and should live and who are conscious both of the difficulty of distinguishing between economic and non-economic behaviour and of the inter-dependencies between the two when the distinction is concocted, will see some economic relevance in almost any serious literature, and a great deal more in much of it than in some technical prose.

It is impossible for the young economist to determine a division between General and Professional reading without taking a view on these moral and technical questions. They are, obviously, very difficult for a young man to answer, and altogether too important for the advice of elders to be taken on trust. Nor is it safe for him to postpone them until he knows more of the world. Suppose he sought to do this, and started with specialist economic reading leaving till later the option of introducing general reading to redress the balance. By the time he makes up his mind it may have been subdued into a habit of professionalism, so that the case for general reading is beyond his imagination. Or, if he then decides to change to general reading, he will be left with a set of increasingly outmoded memories of the science and be increasingly divorced from his multiplying juniors. On the other hand should he start with plenty of general reading and plan to decide later whether or not to concentrate on professional matters, he may find first that nobody will give such a young dilettante a job, and then, if he escapes that fate, that he has left the technically most difficult of his reading tasks to the time when his intellectual wits are blunted. Thus on the whole, the unfortunate youth had better make up his mind while still young and inexperienced, and recognise that the scope for changing his plan intelligently later on will be limited. But before he does so, it would probably do him no harm, if not much good, to collect the views of his elders, and pick, among the variegated set of contradictory gospels he will be given, the one that seems least unsympathetic to him.

What he would get from me, though with the utmost diffidence, would follow from two propositions. I believe, first, that in its present unfinished state economics most urgently requires of its students a constant recognition that they are dealing with a wide range of inchoate behaviour, and not merely with the rational maximising so convenient to theoretical model-building. Hence technically speaking they ought to read a lot about general human
activities for the sake of their profession. Second I believe that once a man has become an intellectual (which may be for good or for ill and is not a choice he makes for himself) it is both for his private pleasure and a social duty that he become a generally educated person, partly released, by wide reading, from the restrictions of his own time and place and class into a wider experience. Thus I have it both ways - technically and morally - in favour of a high proportion of general literature in serious reading.

Anyone may - and since this is an extreme view nowadays, most people probably will - disagree with these propositions, but, in order to get on with the argument, I postulate the allocation to general literature of 3000 out of the 4000 devoted to serious reading, and assume that in the composition of these 3000 there is rather more, for economists, of history, politics and philosophy and popular science than there would be for other people, and a little less, though still a lot, of novels and poetry.

III

On this basis, consider next the balance between different kinds of economic writing within the 1000 for which the young economist has time allotted. This poses less grand and intangible questions than those so far touched on, but the matter is still far from easy. The existing stock of books on economics must provide many lifetimes' reading on this basis. Fifty? A hundred? Five hundred? It scarcely matters. And every quarter one? five? ten? lifetimes are added, and again it scarcely matters which. Some principle of selection is still imperative.

There was a time when it would have been at least not too implausible to suggest that the young economist should read a few general treaties together with a few slightly-specialised discourses on main branches of the subject and then choose a specialism narrow enough for him to be able to encompass its whole literature: the former would give him a good outline of what was known (or believed) about the whole science, and the latter would, though narrow, still be wide enough to cover an interesting tract of human affairs and theorising about them. But that is long past. Some hundreds of books would be needed to skim the whole range
of our present lucubrations, and a specialism narrow enough for its whole literation to be read (even if nothing else were) would be a speck in the ocean of the subject.

It is obvious that an economist who wishes to contribute to the progress of his subject will have to specialise and specialise on a narrower topic than used to be the case. But it is merely consistent with the view of economics that led me earlier to demand wide reading outside the subject, that I should assert that, within it, he cannot only specialise but must undergo much general reading, if only for the sake of becoming thereby more competent to advance his specialism. Economics cannot be torn up into separate parts which are individually and in isolation of any real use to anyone. Hence I would suggest a division of 600 for general economic reading and 400 for a specialism.

If the latter were to cover the whole literature of a selected topic, it would imply specialism upon very silly little topics. But fortunately the admirable institution of survey articles and volumes on recent advances save even a serious specialist student the need to read all that is written in each field and permit a broadening of the definition of any chosen topic which (in conjunction with general reading) may make it viable.

There seems nothing useful to say about specialised reading in the abstract, but the selection of the 600 volumes (the book a month) which are to give the young economist, in time, a general view of his subject deserves some discussion.

A crucial consideration here is the fact that economics is an eminently unfinished science. This, paradoxically, is one reason why there is so much too much of it to read. Imagine what its literature would look like if it were ever finished, in so far as any science dealing with continuing human affairs could be finished. It would comprise (a) a mountainous record of all the facts that might ever interest its students for their own sake and/or be required to support its empirical laws; (b) completed explanations of the past, containing summary abstract statements of the concepts and relationships involved in explanation, and quantitative empirical applications of these successful theories to the past record; and finally (c) a body of theory (closely resembling that used in explanation) for application to forecasting and planning as the latest figures of the past
and exogenous data and forecasts of relevant non-economic factors become available. Of these three categories the first would of course be exceedingly huge: but it would not be required reading. It would be digested into the qualitative and quantitative laws provided in category (b): that together with (c) would be the literature containing the completed results, the fruits, of successful analysis. And it would, we could hope, be a very concentrated product. It is true that, because economics deals with such complex behaviour, any very close-fitting theory and explanation would itself be complex and thus lengthy: but we would hope to have, as well, rougher, simpler, shorter models that fitted well enough for general purposes. Indeed one might envisage a family or hierarchy of presentations ranging from (say) 10 to 1000 volumes, the shortest containing all that anyone but a specialist needed to grasp admittedly a crude picture, but the best crude picture possible at that length.

But at present we have not got all the facts we need, or all the concepts, or the right theory of either kind (so far as we can tell) and we have no definitive explanations of anything. We have instead a huge literature of tentative, incompletely established, explanations largely inconsistent with each other, possibly all wrong, even though some among them may survive further progress with little amendment. Our subject is, as it were, a huge construction site on which all sorts of experimental structures have been for centuries and are still being put up, most or all of which will disappear when the best kind of building for this awkward terrain is eventually discovered. The site is too large and too cluttered for anyone to explore it all. Merely to wander at random, or merely to be attracted by the cries of the loudest-mouthed builders currently toiling around would produce muddle and exhaustion. It is much more difficult to plan one's general reading intelligently in an unfinished science than in a completed one.

My own conclusion from this is that the young economist should base his plans of general economic reading, reading outside his specialty, on an acceptance of his (or anybody else's) inability to find any firm conclusions, and especially upon his (and anybody else's) inability to judge the soundness or otherwise of the latest work outside his own field. He should give a large, but not of course exclusive, role to reading up past and present economic facts, and the more useful (by which I mean conceivably,
applicable) parts of theory. This should give him a sense of what the real problems are, of what there is to explain, to forecast, to plan. That he should regard as a precondition for reading about some of the conclusions his contemporaries and predecessors offer to these problems. But he should not, and need not, pretend to know all their answers, nor should he feel obliged to believe, still less preach, them with more than the most light and tentative faith. He should not seek a creed or, if he has not found one, feel guilty that his reading is defective and that he should go on until, in exhaustion, he surrenders to some economic revivalist. As a preventive to premature faith I would suggest (i) that his general reading other than of facts and theory should largely be confined to the sequence of the main classical treatises, and to the volumes of surveys of recent advances, and (ii) that he should quite deliberately abjure the latest thing, the last bold solution in all fields outside his specialism. If I am right in thinking that the latest fashions quite often prove to be of no or but little permanent value, he simply has not time to follow them. He should, at the outset of his career, abandon any hope of becoming the Complete Economist and when he finds himself beginning to know all the answers, he may lament that middle age has stolen upon him.

To sum up, on this first problem of the categories of reading, the main divisions of an economist’s reading, on this set of arguments or assertions, thus turn out to be these:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frivolous reading</td>
<td>1000</td>
</tr>
<tr>
<td>General reading, i.e. imaginative literature, history, politics, science and so on</td>
<td>3000</td>
</tr>
<tr>
<td>General economics</td>
<td>600</td>
</tr>
<tr>
<td>Specialist economics</td>
<td>400</td>
</tr>
</tbody>
</table>

Of course, even if this be a reasonable estimate for normal academic economists (if there be such things), particular individuals will be better advised to do something very different. But these are the kinds of totals and kinds of proportions which one would wish a young man to consider.
A brief word next about selection within the categories of serious reading, and the temporal order of the total program.

Faced with an unaided choice of 600 out of 60,000 or even 6000 books none of which he has yet read, the chances that a young man will waste his precious time approach $99/100$ or $9/10$. There seems nothing for it but a large measure of reliance upon Selected Bibliographies provided by Committees of Elders. At least they have read more of the stuff than he has, and it would be unduly disrespectful to suppose that their selection would be no better than random. One must envisage, as the implications of Professor Gershenkron sink in, the creation of many such committees producing select bibliographies of many kinds, and that membership of them would be a high honour and responsibility, productive of much greater public reputation than mere authorship. But, of course, they must not establish any kind of intellectual dictatorship. After all no practicable committee will have read the lot (except perhaps in the case of highly specialised bibliographies), and their members will be men already at least half worn out. Perhaps two working rules would help: that each published list shall be a bit too long (so that some random selection has to be made within them) and that each reader should read a small proportion of books not included in it (but found instead by chance exploration of the shelves of large libraries).

Some dangers from getting the phasing of reading wrong have been mentioned. A long and exclusive concentration upon any one category would certainly be damaging in early life. And certainly if he can bear to wait, and postpone his creative urge, the main dose of specialist reading should be postponed until the rest has been well sampled, and his specialism can be seen in proportion. Perhaps in a balanced program the young man should start, in each class, with the more recent works listed (though, on arguments already advanced, there would only be very few in the specialised bibliographies): the merits of the older classics are sometimes concealed from the young by the strangeness of their language and reference.

However, it is hard to think of precise advice, and maybe the young economist, once handed his bibliographies and convinced by the simple arithmetic of life-tables and
the catalogue of the Library of Congress that he must take them seriously, can be left to follow his nose. Noses are individual things.

V

Let us turn next to the question of the implications (if any) of Professor Gershenkron's horrible remark to the young economist's ambition to appear in print.

When one first broods upon the thought that there is maybe 1000 times as much economics in existence as any one of us can ever read, one is tempted to jump to the injunction that he should, for Heaven's sake, not inflict any more on the world. If we are already nearly choked to death with print, how can it conceivably be right to offer us any more?

Up till 1900 or even later the young economist who got himself into print could probably feel he had done a useful thing besides satisfying the innocent vanity of sharing somebody's index with Adam Smith and Mill and Marshall. His publishers would in all likelihood have been able to reject his manuscript had it been merely repetitive. Their assessors would have known the whole literature of his specialty, and even if his offering were, though original, not very interesting, it would not have prevented many of its readers from reading better things. In those days to print economics was to add to the understanding of the science. Today plainly this is no longer so. Even among original contributions anything that is mediocre, or half-baked, or bright or flashy is now intolerable in the sense that it prevents its readers from reading older better stuff in a manner it never did before. And with such an inhuman mass of prose already in existence, how quite impracticable it must be for any editor or publisher to know whether a new manuscript is in fact original! and what harm he does, how much harder he makes the reader's selection problem, by printing ever more shop-soiled versions of practically the same old thing!

It is right I think to infer that it is now a sin to persist in the old attitude that anything literate and not obviously idiotic is to be welcomed into print if there is something good in it not previously said or said in just that way. But a total ban would obviously go too far, if it be accepted that our science is genuinely incomplete.
The tests implied by our earlier argument for any manuscript proposed for publication are rather 'Is this book or article one of the 1000 best books for any present or future reader?', and 'Is there a spare syllable in it?'. If these questions are answerable respectively with Yes and No publication is still pardonable.

It is possible perhaps to specify categories of prose which (if terse enough) would pass the first test. Suggestions are:

1. Descriptions of hitherto unrecorded economic events. (We still want more facts.)

2. New theoretical analyses which (a) could not readily have been thought out for themselves by anyone who has grasped existing work on kindred assumptions and (b) are empirically testable or imaginatively relative to the real world or introduce techniques that may become so.

3. Inductive studies based on all the available evidence about new topics, and confirmation (or rejection) of extant generalisations based on the addition of fresh evidence when there is enough of it to support final or controvert provisional conclusions.

4. Discussions of new policy problems (or fresh discussions of old ones) when there are enough new facts or enough analytical difficulty to warrant the attention of academics.

5. Mere restatements or up-datings of facts, theory or interpretation when these are so neatly or so well expressed that they may claim to supersede existing tracts of literature several times as long. (Part of the desired process of reducing the amount of economics even Methuselah should read.)

This would let a lot by, but I guess a lot that is now published would not fit. Much theory which is no more than elegant variations on the irrelevant would be banned. So would all mere titivations. So would also all those general studies of large topics of which the empirical basis is limited to a few selected cases the writer happens to have
swotted up. So would all those innumerable textbooks which are simply rewritings of older things with the examples revamped to be more local and contemporary. And only if they be firmly classified as frivolous reading (to compete with time otherwise devoted to detective stories and newspapers), should we admit those affirmations of prejudice about contemporary policy which economists so frequently contribute to the daily and weekly press, and sometimes produce as books. (Professor Galbraith, please note that no condemnation is implied: he's much better fun than Punch.)

All this may sound very pompous, very negative, very obscurantist even. But surely when the channels of communication are so horribly jammed up they can only be cleared by imposing ever stiffer standards for admission to them. You can double the width of roads, but not the brain-space of economists. To persist in the old generous spirit is to believe that the more the traffic the faster it moves. Presumably there has been more economics published in the last ten years than in the thirty before. But, apart from the fact-recording (which was mostly done by government departments anyway) has progress in understanding been anything like commensurate? May these facts not be related causally?

VI

At the present moment it is of course a mere counsel of perfection to plead for a reduction in the increasing torrents of muddy prose pouring upon (or past) us. Appointment boards fawn on candidates with 'publications to their credit'; and what candidates resent this? Calendars and Annual Reports gloat over lists of publications. New universities must have their house journals. There are so many libraries stocking up with the latest thing that publishers need not be selective. What end is there to anthologies? And what middle-aged economist is shy of collected papers?

Yet if we worried long enough about that horrible remark and accepted its consequences to our plans of reading, these things need not go on forever, any more than did the folios of sermons with which in past centuries bishoprics were landed, and the cause of virtue believed to be served.
Selection committees could mark down candidates whose publications did not rate in the five categories distinguished; they could admire the restraint shown in not publishing good papers; they could ask to see where their candidate had got to in their reading lists and test their grasp that way. We could all allow ourselves to groan aloud when our colleagues send us offprints. The young could resolve not to read, and bibliographers not to record, anything non-factual less than ten years old. Librarians could refuse to buy new things for five years unless an accredited specialist required them. They could ration their purchases of quarterly journals, and be lavish in buying annuals only. And everyone of us should always ask when we see a new book: is this in the 200 or 300 (or whatever it be) unlisted books I have yet time to read. All this would be most salutary to publishers, and as the years went on it might reduce that muddy torrent to the clear thin stream we need, for the relief of readers and the proper advancement of economics.
KEYNES'S GENERAL THEORY: THEN AND NOW*

I

In the note commanding this talk Professor La Nauze explained that this seminar series is designed for 'second thoughts' and 'retrospects' about past books and events from speakers who were around at the time. He challenged me to a paper on Keynes. It was to be, in his word, 'Keynes and all That - Keynes in Cambridge and the General Theory, its effect then - and what has become of it all - not a technical talk but reflections and reminiscences and queries about the Keynes legend'.

As you should expect, but probably do not, the victim's first reaction was one of indignation. On the way down to the grave there are two milestones. At the first the young start calling you Sir. That happened to me years ago, though not in this country. At the second your colleagues start asking for your memoirs. This was the first occasion I'd struck that, and it seemed to me too soon, far far too soon. But who am I to question Professor La Nauze's impeccable sense of time? If he says that I'm on the verge of senility, that my quaverings must be taped for his archives while there is still a chance to record them, that no doubt, is that. So here goes. And if what follows is garrulous, egocentric, vague about dates, insufficiently documented and not a little grumpy, that seems to be in the contract.

I am going to talk about the General Theory rather than about Keynes. Though I saw him quite often as an under-graduate, I was in those days so very very young, so pathologically tongue-tied, and so abjectly afraid of him, that, despite his kindly efforts, we never made much contact.

*Paper read at a seminar in the Department of History, Research School of Social Sciences of The Australian National University.
And besides Harrod has written a long life, a good book, and Austin Robinson a shorter memoir, even better. I will merely record that, as a man, he was and remains the only idol I have ever had. He was so much ahead of the field in wisdom, intellect and power, wit, in art, in generosity, in his range, and in the ease, gaiety and simplicity that went with all this, that I have never had reverence left for any other famous men, economists or not, that I have since encountered. He was dazzling, and he's away up there with Montaigne and Voltaire and Hume beyond description and discussion from us worms.

But his last book is another matter. It was a public act and one can try to assess it as such, both as it seemed then and as it seems now. My own economics nowadays are probably too eccentric for my present views about it to matter much to you, and I will give them only briefly at the end: most of what I have to say will be about the General Theory as it seemed to an adolescent thirty years, and a whole world, away. By way of introduction I will first fill in the background of that distant time, beginning with a little social history, and going on to sketch Cambridge economics, the tradition to which Keynes's book was a climax.

II

Like many of my generation I was led into economics from politics. My parents, modest professional people in a small East Anglian town, were, exceptionally in those days for such people, keen socialists: they had positively been introduced to each other by Beatrice Webb at a Fabian Summer School. Though they were active in many good causes of local and temporary kinds, fundamentally they believed that all the ills of the world would end only when Labour ruled, and the wicked capitalists entrenched in the seats of power were dethroned. At elections the Labour candidate stayed with us and the house was full of local and visiting orators proclaiming that faith. I do not know why it was but we children were all a little recalcitrant. Perhaps we thought Mr Ramsay MacDonald was getting attention that might have come our way; perhaps the sight of Mr G.D.H. Cole in the flesh, or attempts to read his terribly dreary books, put us off; perhaps that sympathy for underdogs we were all taught got itself extended to the capitalists we heard so
often denounced but never met. Perhaps, as children do, we just wanted to go one better.

I found my 'one better' when, around age 15, I lit upon the Economic Consequences of the Peace alongside Shaw and Wells and Cole and the Webbs on my parents' bookshelves. It was there, no doubt, as another recent proof of the iniquity of Mr Lloyd George and the Coalition. However that may be, it is a book so beautifully written that even a 15-year-old could be seduced with thinking he knew what it was about, and two things in it surprised this child. One was that its invective was directed not so much at the wickedness of our rulers as their stupidity. The other was that there existed, apparently, a science which dealt with the ills of the contemporary world as soluble problems which had to be analysed before they could be solved, a science which, moreover, simply brushed aside the whole doctrine of socialism as practically irrelevant, half-baked and romantic. This was a liberation. For a timid child the prospect of finding fools in high places when he grew up was less frightening than that of meeting villains. And besides, Labour, twice in office, had proved that to know what to do was much more urgent than attaining power and having not a clue as to what use to make of it. So off I went to Cambridge to sit at the feet of the only economist I'd ever heard of.

The political urgency of economics grew steadily after I arrived at Kings in 1933. It is very hard now to convey to anyone under forty any sense of how blackly depressing the world was in the early 1930s. It was not merely that there were millions of unemployed, whose festering boredom and misery were all around, inescapable every time you went into the street. It was not only that for ten to fifteen years governments had been continuously impotent and silly. It was worse than that. For the situation, already in the 1920s worse than anything ever known before, was getting worse yet. The economy would pick itself up a little for a year or so, and then collapse again to something lower yet. Nor was even that the worst. The foundations of ordered society in Europe, the ordinary decencies of peaceful civilisation, which had, with interruptions, been strengthening for many generations, seemed to be breaking up under attack from every direction. In Italy Mussolini, not then to be dismissed as a clown, grew more evil yearly. In Germany the unspeakable Hitler
cheated his way to power, and every month or so committed some new and more startling atrocity. Those who have never heard a live broadcast of the tomtoms of a Nuremberg rally do not know what it is to hear the devil unleashed in all his power - a sound disconcerting to rationalists. France stank of decay. In England we had our Mosley, an incipient Hitler, and a very rich and clever disciple. And then the Russian terrors, for all but a few, blocked off any escape to the Left. The ultimate abomination of a new war came over the horizon, and the prospect was not yet the despairing consolation it later became, for it did not seem even remotely likely that the Macdonalts and the Baldwins could destroy the Hitlers and the Goerings. Thus we were all in a very apocalyptic, not to say eschatological mood. It is the exact truth that the only hope any of us could see of containing, and eventually maybe reversing, these rising tides of horror seemed to be in the discovery, in time, of some new treatment for the multiplying diseases of a dying capitalism in the shortening list of countries still civilised. And that meant economics, and, since there was nothing serious going on elsewhere in England at the time, economics in Cambridge.

What was that like then? It is almost as difficult to recreate it today as it is to revive the political emotion of the time. But several points must be made.

1 To undergraduates at Cambridge in those days economics was a large but not overwhelming subject. The number of books you had to read before you could regard yourself as at least half-fledged was reckoned in tens rather than hundreds. Only two or three journals needed attention, and of course there were almost no tomes of official statistics national or international.

2 The books you read, headed by Marshall's *Principles* and Pigou's *Welfare*, were the real thing: addressed to the scholarly world and the serious outsider and extending to the intellectual boundaries of the science. They had no pedagogic intention: they were not pap for examiners. You read them as an adult not as an undergraduate: they were for life and not just a Tripos.

3 The subject had not yet disintegrated in specialisms. There was no separate branch of pure theory with votaries and a literature of its own. Pure theory,
largely in footnotes and appendices, was the mere preface to discussion of the real world, organically linked with it. Furthermore the positive and the normative were fused, and the end-product of almost any discussion was a conclusion about intelligent public policy. The tone was hostile to laissez-faire: serious economics was indeed largely conceived in terms of ferreting out the fallacies of the naive and antiquated doctrine.

4 Finally, we were taught, or at least gained the impression, that economics was a mature subject, not complete but with its foundations and much of its structure well laid and thoroughly settled into the ground. Our teachers were the pupils of Marshall, and Marshall's Principles, though published in 1890, contained, and still retained - then as now - an unsurpassed description of the elements and much else. That tremendous tome, and the two other big books in which Marshall in his old age assembled the fragments of the unfinished later volumes were the quarries from which almost all else was fashioned. We were told that almost any new theory was to be found quietly hidden somewhere under their all too smooth surfaces and their all too Victorian style. So it always was: and so (incidentally) today it still is.

But, and here we start at last to come near Keynes, the Marshallian system, vast as it was, was unfinished in two respects. He had planned his Principles in three or four volumes and he explains in the preface to the completed volume that, among other great topics, money and employment were deliberately left out of the first, for later treatment, and also that he dealt mainly with normal conditions. His fragments on money dating back into the nineteenth century were indeed produced in this last book, but he never dealt in detail with the trade cycle, the topic which, up till 1914, naturally subsumed the whole question of unemployment. Thus the two aspects of the economic system where things had gone most wildly wrong after World War I were scarcely fitted into the whole structure of the science as we saw it. And that our world was not the normal world of the old Master, that was obvious too. Thus these big contemporary issues, as problems of theory, lived in a confusing and confused semi-independence of the main body of the science. They didn't hang together or fit in with the main structure. Nowadays if two bits of economics don't hang together no one cares
a rap, for the science has crumbled in an infinity of scattered fragments each of which is being sundered into yet smaller chips by platoons of blinkered specialists.

But the philosophic essence of Marshall's thought lay in his vision, shared by his pupils, that the economic system was an integrated organic whole interdependent in all its parts: the mottoes on his title page were *Natura non facit Saltum* and *The Many in the One, the One in the Many*.

Technically speaking what had developed was a bifurcation between the 'real' and the 'monetary' facets of theory. This was intellectually unsatisfactory, and Pigou, Robertson and Keynes were concerned, as academics, to remedy it, to complete the harmonious unity of the Master's teaching. But there was far more to it than that. The whole problem of discovering the right public policy for the present day turned on it too. And, as I have insisted, on the solution, the urgent solution, of that problem turned, we thought, the survival of civilised life as we enjoyed it.

In policy terms, as I need scarcely remind you, the trouble was this. As the only remedy for depression and unemployment all orthodox right-wing opinion, and all the allegedly informed opinion of the City and the central bankers were for balanced budgets, for low taxation, and low public expenditure, for the preservation of the gold standard, for cutting money wages, and such like measures. And those policies of austerity, restraint, sound money - of sweating it out until confidence was restored - were the policies to which you would indeed be naturally led by extending Marshallian thought to the analysis of depressions. He had not made that extension, but it was where, obviously, his awkward discussion of related matters pointed as did most other orthodox economics: and in terms of the kinds of trade cycle they had before 1914 and the limited administrative capacity of governments in economic affairs in those days it was not nonsensical. But if, leaving orthodoxy and the Victorian age aside, you looked at the facts of the contemporary scene and analysed them in terms of the semi-independent and largely new corpus of monetary theory, you arrived with equal or greater ease at quite opposite prescriptions: reflations, massive public works, exchange adjustment, revenue tariffs, extravagance of every kind. All these policies had been vigorously urged by Keynes and all the other radicals for years.
Though untried and startling they were obviously the right policies for those who saw the world of the 1920s and 1930s as it was and who were temperamentally disposed to insist that something, that anything, be done to change it. But to the more conservative, the cautious, the orthodox, the puzzled and the frightened, i.e. to the majority of responsible Top Men, it was heresy, all the more dangerous for its obvious attractions, and they earnestly believed that such wild and impatient behaviour would, though they knew not how, make bad worse. It had everything wrong with it: it sounded Socialist; it was the sort of thing Mussolini and Hitler were up to; it was un-British; it flew in the face of all that was tried and true, including such economics as they knew. Was it not even reproved in what they innocently believed to be the centre of dangerous Leftism, the London School of Economics?

The public debate is very well remembered. What one can easily forget is that in a more sophisticated way the same tensions were to be found among the senior Cambridge economists. Pigou and Robertson and Keynes were Marshall's favourite pupils. They revered him far more, and had explored his hidden depths more deeply, than anyone else. They knew well enough that the conventional conservative line was not in Marshall, that the circumstances of the day were not the kind of circumstances that the Master had ever envisaged; and that his incomplete system had to be extended and adapted to cope with them. But that of course did not mean that the deflationists were wrong, or the inflationists right. There were good technical arguments going all ways. Sorting them out was of baffling difficulty because the Marshallian system which fitted nearly everything didn't fit the twenties: his heirs had to wrestle with the fundamentals of theory as well as its application to a changing and only half-described scene. They came up with answers so different that their common discipleship and even their personal relationship became strained. Keynes was the biggest among these big men, the most urgent for action, the most sensitive to the contemporary world, the most erratic, the one with a streak of iconoclasm, the one who, having a passion for the intellectual history of Europe, was least bound to his immediate teachers. So it was he who came out with the boldest answer. Its gestation was long and its delivery a struggle. So I come at last to the General Theory.
Never did a book fall more quickly and more completely into the hands of summarisers, simplifiers, boilers-down, pedagogues and propagandists. To get at what it seemed like at the time (and perhaps to what it really was and is) one has to fight one's way back through a cloud of commentators, and try to see it in a more empty landscape.

Everybody already expected something brilliant from Keynes, but in every possible way the General Theory was a much grander affair than anyone had bargained for. Any undergraduate will nowadays write out (what he thinks to be) Keynesian economics in two pages: but Keynes needed 400, wasting no words. The book was long, elaborately organised, intensely technical and extremely difficult. There are some chapters which remain riddles today. It was vehemently controversial: and passionately in earnest. He derided his own past views, and threw away the 2-volume Treatise on Money published only six years before. He laid into Pigou, his colleague and Marshall's successor in the Chair with a barely courteous ruthlessness, he even took Marshall himself apart. He plunged far back out of Cambridge, he revived all sorts of ancient heretics, he denounced the whole apostolic succession of classical economists from Ricardo onwards, he tore up conventional theory about money, about wages, about interest, about investment and about capital. He demolished, but only incidentally to the construction of new and complex system from the elements upwards. This stretched, in one great arc of argument, right from pure theory to social policy. As an economist he challenged the validity of the accepted technicalities of his science; and as an economist also, a leader of a profession which had always resisted the social philosphies of the Left, and accepted, if regretfully, the roles of inequality and commercialism in modern society, he came out in a terse but extraordinarily forceful last chapter for a new view. He argued, not as an assertion of political preference, but as a necessity of economic science, for a far greater measure of equality in incomes, for a large socialisation of investment and for the State as the controller of the economic system. In the context of the political scene of the 1930s the General Theory seemed a very left-wing book indeed, more radical than anything Keynes had himself said before and of course way out from Marshall and Pigou, though they were far from conservative.
Add to all this that his style had changed. We knew that his earlier books had been beautifully written with some celebrated purple passages; and his short biographical essays and his economic journalism were pre-eminently witty and enchanting in a light and ever-so-slightly mannered twenty-ish way. But the prose now was thicker, even clotted sometimes, the jokes further apart and touched with bitterness. He still wrote like an angel but he had moved up from the cherubim to the seraphim and to a larger deeper trumpet, imparting awe rather than delight.

In short the General Theory fell among the economists of the day with a very big bang indeed. Nothing, for any of them, was ever quite the same again.

Among Keynes's own coeval colleagues at Cambridge the whole affair was deeply painful. Though Pigou and Robertson could be temporarily offended at the violence with which they personally were criticised they were men to swallow that, from their ebullient friend; what, as loyal Marshallians, they could not take was the presentation of the new analysis as an absolute break from the tradition of the Cambridge School. They could see the logical connections between the two as well as or better than Keynes could, and they could argue that the new assumptions fundamental to Keynes were not so much better than those allegedly implicit in Marshall that the old system had to be scrapped in this almost contemptuous way. They could see that, mostly by his manner though partly by his matter too, he had added to the confusion in academic economics: but that this eccentricity would prove worth it because of its eventual consequences to public policy they could scarcely be expected to have seen at the time.

The reactions of younger men were more diverse, as you would expect, and more complicated. With few exceptions, they ranged from cautious admiration to whole-hearted discipleship. I will not however analyse them here since all the material, for anyone interested in the psychology of indoctrination, can be found in an excellent book edited by Professor Lekachman, published in 1964. It contains five of the reviews or expositions published in 1936 by contemporaries, the three outstanding youngsters of the time, Reddaway, Champernowne and Lerner, and two of the

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best of rather older but then still young economists, Harrod and Viner, together with their retrospects written in 1963. It also contains obituary assessments written by Haberler, Sweezy and the egregious Paul A. Samuelson in 1946 and their 1963 second thoughts also, and best of all a parallel pair of pieces by Austin Robinson, the first of which is the splendid short biography (originally written for the Economic Journal) to which I have already referred. Though all these nine authors appear just a little on their best behaviour - or at least eight of them do, because one never had such a thing - the volume gives a vivid picture of the General Theory's intellectual impact on the cream of the younger professionals. I refer you to it for the serious comments.

Lekachman's anthology is not, however, designed to throw light on the book's effect on less expert readers, and especially upon the kind of contemporary students who would not pretend to any close understanding of the fundamentals of theory and analysis which were at issue in it. Most of these second-rankers, like myself, were learning their economics with political rather than academic obsessions. To us it was, I think, if anything even more overwhelming than to the dedicated professionals and, obedient to my instructions to confess, I will try to explain why and how it so moved us in those distant days.

Of course, it frightened us - indeed it frightened me out of economics for twenty years, and I only crept back when it was clear that there were no more Keynes around. If serious economics was to be as difficult as this, original work in it was not for us.

However, we could, just about, understand, and because we could do it only 'just about' the effect was perhaps the greater. What we got was joyful revelation in dark times. We thought that Keynes had, to put it shortly, found the 'flaw in the capitalist system', and had proclaimed its remedy. He had demonstrated that this flaw lay in the absence of any mechanism for the maintenance of full employment, in the possibility that the system could drift along in various degrees of slump forever. He had shown that the fact that the level of employment had generally been high before 1914 had been essentially a temporary and accidental fact, and that the horrors we had seen throughout our young post-war lives were more natural
to and typical of an ill-controlled modern capitalism. His system explained in a direct and fully persuasive way these horrible facts of contemporary calamity that the Marshallian economics we had just half-learnt did not explain, and even, in a sense, denied. The mystery of contemporary iniquity had been unveiled by a masterpiece of sustained intellectual effort. All the other turgid stuff which lesser men were producing to rationalise the mess around us simply faded away. Now we all knew why.

Further he had gone on to examine the cures, and these, flowing by an inexorable logic from the analysis, were of the kind to revive the idealism even of a disenchanted socialist. Keynes's reformed capitalism had everything and more the Fabian generation had looked for in socialism: it was morally speaking egalitarian, it was fully employed, it was generous and gay; it was a very new sort of capitalism controlled not by the greedy votaries of Mammon but by the intellect and joie de vivre of an intelligent and robust democracy. It had no more place for the dull, mean and fearful parrots of Birmingham and the City then in charge of affairs at home than for the suicidal tyrannies of the Left and the bestialities of the Right then boiling up abroad.

Thus the General Theory was to us less a work of economics theory than a Manifesto for Reason and Cheerfulness, the literary embodiment of a man who, to those who ever saw him, remains the very genius of intellect and enjoyment. It gave a rational basis and a moral appeal for a faith in the possible health and sanity of contemporary mankind such as the youths of my generation found nowhere else. We took as our religion that short and now classic peroration about the power of ideas, and, in the very doubtful hope of surviving the impending war, off we went to spread the light as clerks in Whitehall. There after two years attending to the drains of Liverpool slum schools I duly found myself ensconced in the war-time Admiralty telling the wives of naval officers, that they had become widows - and left my youth behind.
That, so far as I can remember, is what it seemed to mean at the time. I have tried to suggest that it was all rather exciting, and that in the adolescents of the day everything, from international politics to pure theory, and emotions from the darkest of depressions and forebodings to exaltation and new dawns, all brewed up as they read the General Theory. If what I have said seems overdrawn, even overscented, I can only repeat that that is how, as I remember, it looked and smelled.

What is left of the book now?

It is part of the mythology of the present day that we have to thank the General Theory for the adoption and success of full employment policies during that last twenty years. I have doubts about this: I guess that the wartime necessity for full-scale economic mobilisation and the electorate's resolve never to repeat the 1930s would have produced such policies even if Keynes had never lived, and never written the book. But he did live, he did write it, and he and Robertson and a shoal of their disciples did swarm over Whitehall and Washington and Canberra during the war years, so that one should not discount the legend too heavily. And if you ascribe to the General Theory only a tenth part of the difference between what national incomes were in the 1950s and what they would have been had affairs been run with the incompetence of the 1930s that still makes it the world's most productive book by a long way. Nor should one forget that more than money was at stake in the practical conduct of employment policy in the late forties and fifties: a post-war slump on the 1919 model would have produced a Soviet Western Europe and long before now the northern hemisphere would have been playing atomic tennis (a game in which one rally does for both players and most of the bystanders). From the grey depths of my cynical middle age I will not let great men account for much in the determinate sweep of history, but I keep a soft spot for the General Theory.

However, there is much more in that book than precepts for employment policy. There is a lot of pure theory, or at least of what we used to think such once. There is a general view of the mechanism of capitalism. There is a social philosophy. What has been the fate of these things
during the thirty years in which the literature of economics has become, on my guess, ten times as great as it was in Keynes's day? It is my impression that they have been taken apart, dissected, desiccated, ground up and brushed aside by the army of his successors.

For one verdict on the General Theory as a contribution to pure theory one may turn to Lekachman's book where (as I have said) there is reproduced an assessment published by Professor Paul A. Samuelson of the Massachusetts Institute of Technology the moment Keynes was in his grave and the world made safe for such as he. The General Theory he there informs us is 'badly written, poorly organised', 'It abounds in mares' nests and confusions', 'It is not well-suited for class-room use'. He had 'reason to believe' that 'until the appearance of the mathematical models of Meade, Lange, Hicks and Harrod... Keynes did not truly understand his own analysis'. All his life Keynes was 'fuzzy' about the relationship between identity and functional equality. He was a man capable of asserting that a linear system can never develop oscillations. With trifling exceptions 'he seems to have left no mark on pure theory'. However, Keynesian analysis had begun to filter down into the elementary textbooks and 'as everybody knows, once an idea gets into them, however bad it may be, it becomes practically immortal'. And so on for pages and pages of pedantry and spite.

I quote a little from this notable piece because, when washed a bit, it contains an element of truth and a reminder of how far our subject has changed in recent years. What Professor Paul A. Samuelson of the Massachusetts Institute of Technology means by 'pure theory' is what I would think better named 'economic mathematics'. This is a branch of the academic industry which has largely developed since 1936. It is a midden of ultra-rigorous analyses conducted at the maximum conceivable level of abstraction in the widest possible variety of symbolic styles with a strong preference for the extremely esoteric. Some day perchance something of practical interest to general economics will germinate in it, but meanwhile most of it has only the exceedingly modest degree of relevance which is required to obtain contracts for that curious patron of useless learning, the U.S. Navy. It is indeed true that Keynes was not concerned with this sort of thing. Like Marshall he was a
Wrangler and like Marshall he was profoundly suspicious of mathematical excess, and, so far as an ignoramus in the matters can see, the mathematical structure of the *General Theory* was no more than an adaptation of Marshall's elementary calculus. This facet of his work is thus démodé and it is natural that it should be despised by the fashionable clique of which Paul A. Samuelson so often acknowledges a leadership few would care to dispute.

The sort of theory Keynes was writing was something different: it was theory preoccupied with contemporary reality and contemporary policy. It was certainly a model, and abstract: but it abstracted as little as possible and was set out with frequent reminders of what it omitted. It was an instrument for use and not an object of academic art, not Faberge but Ford. However, even when thus considered the crucial characteristics of Keynes's *General Theory* have become in some ways a nuisance today. Effectively Marshall's technical economics was partial - concentrating on individuals, firms, industries and saying little in strict language about the whole economy - and it was very dynamic, constantly concerned with directions of change over short medium and long periods. Keynes reconstructed it to arrive at a model which was short term, indeed momentary, and aggregative. He was not very interested in the components of the system (though we often forget nowadays that he carefully built up his aggregates from them), and he was not very interested either in dynamics, probably because he thought the system such as jolting, jerking, flapping-about sort of thing that its sequences barely deserved systematic treatment. But largely as a result of his efforts the world now moves along far more smoothly than between the first two world wars. And just because of this the present interest of economists is largely directed towards the patterns of change over time. The great task now is to analyse growth processes as they all interact to produce evolutions in the aggregates. For technical reasons I will spare you, it happens that the Keynesian system is extraordinarily difficult to dynamise in a fruitful way. Harrod started on the job at once, and a host of others have been struggling with it ever since. The literature of growth theory is vast but I think it is fair to say that it still contains more promise than achievement and that the most promising parts of it start from scrapping some of Keynes's most individual
innovations. It is a curious paradox that the highly theoretical book which did more than any other in history for the reality of economic growth proved as much a hindrance as a help to its theory.

Alas too for Keynes's social philosophy. I said earlier that the General Theory seemed at the time a very left-wing affair. Though the point becomes clearest in his other writings and non-academic activities, Keynes was very much an aesthete and an intellectual and a moralist - or do I mean immoralist? - in the traditions of Eton and Kings, and of Morris and Shaw, even Wells. He saw economic progress as leading quickly through the relief of squalor and toil to a world of high civilisation in which the function of income was to serve cultural rather than material ends. He saw the State becoming, so soon as it had disposed of poverty and unemployment, the lavish patron of the arts and the sciences and of all kinds of public splendour and beauty. Perhaps his teaching on these matters lingers on a little among (oddly enough) the Governors of central banks, but mostly it seems forgotten. I guess he would have found our current devotion to the growth rate of GNP at constant prices a coarse and inferior thing: as repellent as old-style capitalism was to the high Cambridge tradition. I guess too that he would have seen our present avoidance of value judgments as a piece of pedantry. The new kind of professionalism that adds to a pride in making its science incomprehensible the boast that it is now also irrelevant to the Good Life would not, I expect, have struck him as an advance.

To conclude. By making me revive the excitement of my youth and recognise the long degringolade of my interminable senescence, Professor La Nauze has left me depressed and elegiac. But I will rebel this far:

You may still read Keynes. You may even still read Marshall. To do so may inhibit an academic career for any undergraduate who did so unfashionable a thing, but there's no law against it. They are still there. They may, indeed, now be buried under the mountain of economic pedagogy which has been piled upon our shelves since they were written. But it is a feature of degenerate ages that in them the excavation of the past reveals much that is as beautiful and relevant and stimulating as the new stuff in the shops.
We don't have to be all hanging around that boutique in Massachusetts waiting for the latest triviality from you know whom. Should economists today read Keynes and read Marshall they would learn a truth which, I imagine, it had not occurred to historians to forget: that thirty or even eighty years is not long in the history of human understanding. If to have read the General Theory in proof makes me a relic, at least let me speak up for the past.
Vico's New Science was first published in 1725. It was totally rewritten for a second edition in 1730 and is now read in a third published just after his death in 1744. The book was virtually unread in his lifetime and, outside his native Naples, neglected for a half century later. Since then it has had a covert fame from the enthusiasm of a small, select and distinctly peculiar succession of eminent admirers.

Goethe met it on his Italian journey and was excited; Michelet adapted it into French so drastically as to make it almost readable; Coleridge went overboard about it and Buckle and Marx. Trotsky, it is said, quoted it on the title page of his History of the Russian Revolution. Croce wrote a book about him. James Joyce puns endlessly about his cycles in Finnegan's Wake. In Edmund Wilson's To the Finland Station he appears as the John the Baptist of the Left.

Nevertheless it was not till the 1940s that two gallant American professors translated him into something resembling English. First they gave us his autobiography with an enormous introduction from which all later writers - me too - draw their learned details of his influence. Later they tackled the New Science itself, and ten years ago, adding further to their merit produced a paperback version, skilfully pruned.

Vico also haunted Schumpeter. Early in the History of Economic Analysis he is described as 'one of the greatest thinkers to be found in any age of the Social Sciences'; and later he is linked with Marx and Galton as one of the 'three greatest sociologists'. 
In 1968 to celebrate the tercentenary of his birth there was an academic jamboree somewhere in the USA which ended up as such things do with a 600-page book of essays by philosophers, historians, anthropologists, sociologists, art critics, literary lights and specialists in law, linguistics and education, among them Sir Isaiah Berlin and the Provost of Kings. As a reviewer in the Times Literary Supplement remarked 'In the twentieth century almost all the humanities and social scientists claim him as one of their leading citizens' or as a cynical nephew remarked when he saw me wrestling with this paper, 'Ah, very trendy'.

But (trendy or not) it is to my mind odd and sad that contemporary economists have not climbed on to this bandwagon. For some years I have felt that Vico has hints for our future and that there is more to be said about him in our context than is said in Professor Tagliacozzo's paper in the recent book. I will try to say it this afternoon.

You should be warned, however. Schumpeter observed that the literature on Vico is 'impaired by attempts of authors to claim the great name for tendencies of their own'. What follows will be a particularly gross example of that tendency. But I will play fair with you by relating (as briefly as I can which is not very) how I came upon Vico and why he rang great bells for me when I did.

Twenty years or so ago I got involved, as an official economist, in the question of the determinants of the pattern of fixed-investment in a dynamic society. Governments in those days were, willy-nilly, interfering in this pattern in many ways, and it seemed well to have some ideas (however abstract) about the market forces which underlaid what they were pushing about. Formal growth theory was no help. It dealt mainly with expanding stationary states, it never had more than one investment good (often the only consumer good also) and it was all in algebra anyway. I needed lots of capital goods and lots of consumption goods and land labour and capital changing at different rates. So I had to go back to Ricardo, fiddle a bit with his assumptions, and work my problem out crudely in English. I started with a pair of two-factor models, one with labour and land, the other with only labour and machines and then tried to blend them together. I made things easier for myself
by leaving out technical progress, changes in preference patterns, uncertainty, money, international trade and the State, and then by arguing from the simplest initial situations I could think of.

Unintentionally, but naturally, I found myself concocting toy economic histories. They were infinitely crude and mechanical. They started with little populations of more or less uniform Economic Men of an entirely conventional sort living with plentiful land but no machines. Though the specifications of tastes and technical knowledge and breeding habits were kept entirely constant, as and when land became scarce and as and when an accumulation process of machines started, they went through various and curly histories. I was especially struck by one of them. In this, starting egalitarian with subsistence agriculture, the economy first became feudal (land scarce, no machines, great inequality) and then, without any intervention by me, started accumulating machines, and as the capital stock spread (widening, deepening, thickening), went through early capitalism, high capitalism, and ended in egalitarian affluence - tick tock all the way.

There was an occasion once when with half a packet of dried egg powder, a little water, milk and flour, I tried to make an omelette. It wouldn't jell and as I tinkered, my frypan displayed before my astonished eyes, next a pancake, then a Yorkshire pudding and finally a sponge cake - entities whose inner connection had hitherto escaped me.

I was reminded of that episode by this. I began to lose interest in investment programs and to think of growth models not just as an aid to understanding rates of change at a point in time, but as embryo theories of economic history, much grander things. Moreover, it appeared that the conventional Economic Man of elementary theory was a good deal more powerful as a point of departure than I had thought. It then occurred to me that to get the variety of histories I had found - some sticking at subsistence, some diving into capitalism, some dwindling into feudalism and never getting out and so on - it was not necessary to vary technical knowledge or preference patterns or breeding habits as I had done. The same variety could be achieved simply by varying natural resources and allowing climate to have an effect on behaviour. All economic history might
be deducible from a single universal and constant structure of human nature, from the same kind of man in the same initial situations in different places. I became much excited.

Matthew Prior long ago described what had happened to me:

Just so with you my friend, it fares
Who deal in philosophic wares;
Atoms you cut and forms you measure
To gratify your private pleasure;
Till airy seeds of casual wit
Do some fantastic Birth beget;
And pleas'd to find your system mended,
Beyond what you at first intended,
The happy whimsey you pursue
Till you at length believe is true,
Caught by your own delusive art,
You fancy first, and then assert.

II

It was at this point that I came to Vico. The earliest writers to tackle large subjects are usually the freshest and most stimulating and I had vaguely heard of him as the first of modern theorists of history. So, with the aid of Messrs Bergin and Fisch, I tried The New Science. It was a most startling experience.

In expounding my toy histories I had had to spell out thirty-six assumptions about human behaviour and starting points before piecing together my then little stories. Here, over 200 years before, was a Professor of Latin Eloquence setting up 114 postulates to describe his initial situation and his version of human psychology before deriving his determinate and logical account of the history of the world from the Flood onwards. He was far less drearily abstract than I, and he had far more history than I. What most interested him was the evolution of language, politics, law, literature, manners and morals but there were little fragments of economics too. His first Age of Gods was recognisably of primitive economy; his succeeding
Age of Heroes is markedly feudal; his third Age of Humanity contained as much capitalism as you could hope to find in early eighteenth century Europe.

It would be idle to pretend that Vico is lucid. The book starts with an engraved emblematical frontispiece, dominated by a heavenly eye connected by rays to a lady in classical dress mounted on a sphere precariously perched on the extreme edge of an altar, and from her another ray reaches a pensive ancient in a toga at ground level, who clutches a plough and gazes at an indescribably miscellaneous set of objects at his feet. Thirty pages expound these riddles. A chronological table of the history of seven civilisations up to the Peloponnesian War follows, with extensive annotations, and only then do we get down to business. This, it must be admitted, is conducted in the most dense, the most gnomic, the most utterly baroque prose you can imagine. Yet through the fog there are repeated glimpses of an extraordinarily sharp and vivid vision of the vast diversity of thought and emotion lying behind the bare facts of history. It is these which, because they were at the time so utterly original, have always fascinated so many other social scientists. But coming to the book from my unusual angle what dazzled me was his exposition of the casual chains in this complex and multi-dimensional history. I could recognise the structure of his argument. Here is the first and grandest of all the growth models. And since such things are the specialty of economists we may claim him as our man, even if he is others' also.

III

Naturally I started claiming the great name for tendencies of my own, and I had some evidence:

1 He bases his model on postulates about the psychological rules of behaviour of individual agents. He purports to make these statements about the way they think and feel. That to me who am old-fashioned is true economics. 'As if' psychologies, behaviouristic constructions belong in my view to econometrics, a worthy but subordinate science with which I am not concerned here.
2 His psychology is constant and universal. However differently people think and act at different times and places, these differences are explicable in terms of stated differences in circumstances. The underlying propensities are the same. There are no racial variations or genetic evolutions or biological mysticisms in either of us. I forgive him his belief that early man (other than Jews) were giants.

3 His starting point is substantially equivalent to mine, and more picturesque. He has wild men left wandering on the hill-tops after the Flood. They are Gentiles: he carefully explains that Jewish history is another matter, being under the repeated care of the Almighty and adequately expounded in the Old Testament. (Fair enough with an active Inquisition around and you are about to invent the theory of evolution.)

4 And then of course, he does it all in prose, still to my mind a possible vehicle for academic discussion. Indeed in his Autobiography there is a splendid passage on the dangers of excessive mathematics for the young, and he repeats it in The New Science. But I will try not to step onto that minefield now.

However, there were two major differences:

1 There is that of coverage. Mine in the miserable modern manner was specialised: just about the evolutions of prices and outputs and incomes in a private market. I had no state and implicitly my commodities were most commonplace of goods and services. Vico, as I have said, covers many more phenomena having, among other things, many pages proving that Homer had to have been written by a committee.

2 Second, Vico's psychological postulates were wholly different from that gaggle of conventional assertions about selfishness, rationality, maximisation, full knowledge and correct foresight which I had made use of. Because he is explaining so many more things than appear in any economist's
arguments he must of course provide a wider-ranging psychology than we do, and, admittedly, people may obey rather different rules in some areas of activity than others, but they cannot be totally compartmentalised. It seemed hard to reconcile his general picture with mine.

Original sin demanded that I persuaded myself that Vico, when translated into modern language, was an orthodox neo-classical economist who had pushed my variations on orthodox tunes a bit farther but, being born two centuries before his time, had not been quite as rigorous as he should have been in his counterpoint. To do this I had first to show myself that the coverage of my models could be extended to match the more interesting additional parts of his with minimal alteration to their economic orthodoxy. Then I had to kid myself that this psychology was not really, not fundamentally, not essentially different from economic orthodoxy either.

The first of these self-persuasions was practicable and not unamusing because it ended up with a sort of good-tempered Marxism. The second I found impossible, and a painful collapse of all my previous reasoning occurred. I ended not with capturing Vico for the neo-classics, but with a conviction that he must capture us. It is this new faith I principally want to urge this afternoon, but a little had better be said about the first task before I get to it.

IV

It is not hard to make a purely economic model, full of rational economic men, conducted at a highly abstract level, cover a lot of things we regard as 'non-economic'. We can treat many of them as, after all, 'sort-of' commodities. Commodities is an elastic term: things like religion, education or charity or games can be squeezed in, if (especially) you can concoct quantities for them and neglect qualitative variations. It is a fudge but not obviously a bad one.

The harder problem is to bring in the State, laws and taxes. But to repeat, if you believe men always rational and well informed in the private market, you ought really
to believe them more or less likewise in the political market. Hence, the thing should be possible. You should not have to treat the State as a branch of crime conducted by a special class of subhuman scoundrels, or for that matter, as the preserve of Philosopher King, needing economic advice. The clue, I think, is that laws are interventions, sanctioned by force, which alter the outcome of transactions in the private market. They are, therefore, always to some people's advantage and others' disadvantage. There is negative as well as positive demand for them. But an effort has to be made or threatened to get them passed or prevented from passing, and the effort that can be offered is in the nature of an investment cost. However, since in this sort of world everybody knows other peoples' positions, potential losers will not bother actually to exert that effort if they know that the potential gainers are ready to put up yet greater effort. Hence, laws pass quietly in fact, and politics is only the clatter of the signalling mechanism. The size and distribution of income are, in the case of laws on economic affairs, the main determinant of the kind of law passed. In a feudal society, a few rich landowners can rig the labour market against a multitude of peasants toiling for subsistence without their resisting. In an affluent society a prosperous proletariat can threaten enough effort to secure transfers from the very rich, who will swallow this. The political market makes the currently efficient choice from the corpus of possible legislation. A lot more realism can then be added to my sort of model and much of Vico's implicit economic history insinuated in too.

You can even drag international affairs in. The Roman Empire was rational investment in land and slaves; capitalists' empires are rational investments in rent from natural resources. You must, however, here allow rather more imperfect foresight; otherwise, there would be no actual wars - rational well-formed man would surrender to factually valid threats if they were big enough.

I used to find such neo-classical excesses rather fun, but that was before the contemplation of Vico's psychology showed me the error of my ways, and I would not now wish to tempt you further up a very casuistical cul-de-sac. I hurry shamefacedly on to the question of Vico's psychology.
The most obvious feature of this psychology is that it is more complex and more plausible than that we use. Our Economic Men are always everywhere very clever indeed, - near omniscient. Vico's range all the way from ultra-stupid to fairly clever.

He is hard to summarise, but, baldly, it goes like this:

The survivors of the Deluge were virtually animals, speechless almost mindless. They slowly learn in the first Age of the Gods to communicate their emotions to each other in speech and develop an animistic rationale for nature, filling it with gods almost as fierce as themselves. But these gods thunder at rape, rapine, murder, and have to be placated by morality and good faith and pious sacrifices, so that men become peaceful and ritualistic. In the second Age of Heroes, however, strong men owning good land and springs of water enslave the less fortunate whom they reduce to an almost animal servility. They themselves, gloriing in their dominance, identify themselves as descendants of the gods, control the sacrifices made to their ancestors and lead heroic lives of war and splendor, god-like, with poets and artists to celebrate their virtue. But as time goes on their slaves, educated by experience and the crumbs that fall from the rich men's tables, begin to aspire to human dignity. They demand equal rights and tame their erstwhile masters, a quarrelsome oligarchy. Only then in a third age of humanity is the equality of all mankind recognised and the true mild civil psychology appropriate to true humanity approached. Popular governments or monarchies, with kings using their unlimited sovereignty to keep their peoples content with religion and liberty, now rule. Philosophers become the mentors of all parties, and civil arts and sciences flourish in a gentle and orderly society, or would, if the wickedness of man allowed it....

Does this not remind you of somebody? Put it in his words: 'Savages live under the dominion of custom and impulse' 'Ruling castes have given their energies to war and politics not to business'. It is only of recent date that normal men have 'a certain independence and a habit of choosing one's own course for oneself, a self-reliance, a deliberation, and yet a promptness of choice and judgement, and a habit of forecasting the future and of shaping one's course with reference to distinct arms'.
Thus far the resemblance between Marshall and Vico is almost uncanny. But then a difference emerges. I hope it is not unfair to suspect that Marshall believed in progress, hoping that more moral nobility and aesthetic refinement would be added to increasingly efficient maximisation and more and better information. Not so Vico, whose pessimism leads him to that circular (or spiral) view of history which so tickled the fancy of James Joyce.

His 66th postulate reads: 'Men first feel necessity, next attend to comfort, still later amuse themselves with pleasures, then grow dissolute in luxury, and finally go mad and waste their substance.'

He derives from this and many other postulates a conviction that the third nearly rational age is followed by a relapse back to something like the first - and so on, round and round.

Three-quarters of the way through the twentieth century we can surely more easily sympathise with Vico than Marshall in the matter on which they appear to disagree. It is therefore from Vico rather than Marshall that I draw my final inferences: some propositions about the desirable future for economic theory.

In the discussion of the evolution of economic behaviour at the beginning of the Principles and in that Appendix A which started life at the beginning of the main text from which I drew these quotations, Marshall disclaims any intention of explaining the succession of patterns of behaviour. But I sometimes wonder these days whether the vast historical studies he discarded, the 'white elephant' referred to in Keynes's memoir of Mrs Marshall, might not have turned out to be a clear modern version not only of Vico's tangled account of the varieties of normal economic behaviour but also a theory of their causation. The preface to the first edition is very suggestive about this. Marshall I guess gave it up because he felt sub-rational ill-informed behaviour was becoming a thing of the past. Vico did not think that, and nor surely do we. Consequently, what we need is just the kind of theorising Vico foreshadowed and Marshall so lamentably gave away.

We have to get our psychologies right.
We require, first, a classification of patterns of economic behaviour lying between the two extremes of Vico's post-diluvian brutes and the sophisticated and successful utility-maximisers Marshall's successors have twisted out of the algebra of his mathematical Appendix, between, that is, the extremes of ultra-stupidity and what may fairly be called near-omniscience. Second, we need hypotheses about the factors determining the shifts back and forth which go on between these extremes. (Except for very short period purposes we must include in our models the trends in behaviour patterns.) In all this we would be concerned, not with the extremes, prehistory and cloud-cuckooland, but with the intermediate types. The inhabitants of the real world live between these extremes, and life there is more complex. There rational maximisation, considered choice, does not extend in one vast set of simultaneous equations across the whole range of a man's lifetime of decisions - as in the near-omniscient man. Nor do habit and custom govern the lot - as in the ultra-stupid man. Here the thing is patchy - habit in this area, impulse in that, rationality in a third. The boundaries of these patches shift from generation to generation and in the course of a normal life time.

Still less are the size and accuracy of men's stocks of self-knowledge, both of objective matters and of their own potentialities of pleasure and pain, treated as they are at the extremes. I presume that ultra-stupid men know little of the outside world or their own potentialities, that much of what they think they know is wrong, and that in their adult lives they learn nothing new and simply go on imitating their parents. But in their adult lives near-omniscient men are oddly enough equally free from learning new things (true or false) or correcting errors (correctly or incorrectly) or imitating anybody in the society around them. They have learnt all they need to know in childhood and have got it right. And what they know, given the postulate of uniformity, is the relevant tract of a universal and constant true nature of man. That at least is what you believe if you are serious in any growth model which is in equilibrium: and I believe in pushing the implications of your assumptions à outrance. The near-omniscient man, who provides the standard model for our theoretical frameworks, has no unexamined or ill-examined habits, he surrenders to no unconsidered impulse, he learns nothing,
for there is nothing of which he is ignorant, he corrects no error because he makes none, he never consciously or unconsciously imitates anybody, because he thinks for himself.

Naturally, when challenged, no economist alive would assert that he believes this model. But we behave as if we believe that somehow or other we can 'allow for' habit, impulse, ignorance, error, learning, 'by eye' in some 'judgmental' way in a second round after we have reached conclusions from technical analyses based on postulates excluding all these things. But we are 'caught by our own delusive art'. A reading of Vico convinces me that these things are so important that this, already bad, method is bad practice too. Blinkered with myths about maximisation and equilibrium, the young economist loses the use of 'his eye'. Or, as my new hero puts it, students introduced at 'an immature stage' to 'the highly subtle study of ... algebra ... become over fine for life in their way of thinking and are rendered incapable of any great work'.

What we omit is doubtless messy. But we cannot hand it to the sociologists, as licensed scavengers of the academically unmentionable. To do so would leave us with nothing but a myth, and besides they ... But no, having after all just put my foot in one minefield I will not step in another.

I will merely conclude that this appalling job of concocting a valid framework for a general economic psychology is ineluctably a job for the economists themselves. I do not in the least know how to do it; but I commend Vico to you because he shows us that, if such a psychology is a necessary foundation for economics, it has to be done.
THE PROGRESS OF ECONOMIC KNOWLEDGE:  
SOME NEW MEASUREMENTS*

During a visit to Australia in 1969, Professor H.G. Johnson gave an address at a graduation dinner at Monash University. As a Canadian coming from the centre of things, Chicago, he could give us much advice. And did, as is unforgettable shown in the article into which his talk was extended, his 'Reflections on Current Trends in Economics'.\(^1\) He spoke with enthusiasm of the rapid expansion in the number of economists and of the marked increase in their professionalism both in training and in the knowledge and technique they are expected to command. He told how leadership in economics 'has been shifting rapidly and overwhelmingly towards the United States' (and reflected sadly on the problems of small countries' standards when not all their students can emigrate and some reach the Australian National University). Whereas, he explained, economics in the 1930s was logical, philosophical, literate, and politically oriented, modern economics is 'distinguished by its emphasis on the quantitative': 'empirical measurement and testing now constitute the economists' main claim to superiority...'.

Perhaps because of their post-prandial origins, perhaps because his audience was largely non-American and still 'unfortunately, looked to Britain as their intellectual centre', Professor Johnson's remarks were themselves sadly non-quantitative. This deficiency has now been remedied. A recent issue of the Journal of Economic Literature gives us a lengthy, thorough and impeccably numerate description of the growths of the output of economic knowledge and of the stock of it in existence over a very long period up to

\(^*\)Reproduced from The Economic Record, March 1974, pp. 130-8, with permission.

1965, and for good measure explains these gratifying phenomena in econometric terms. Those who wish to keep up with Professor Johnson's trends will doubtless read, or figure out, this survey in the original, but a brief selective summary in simple language, with only the irresistible minimum of comment, may, hopefully, assist them, and others, to appreciate it at its true value.

I

There is happily not much doubt about this magnitude. It is readily defined and measured as the number of articles annually noted in the Index of Economic Journals which, from 1886, covers English language articles 'published in those professional journals judged as being of widest use to teachers and scholars of economics by the Committee on Research and Publication of the American Economic Association'.

Whether anything worth counting (such as articles by Walras, Pareto, Wicksell) was written in languages other than English is a point Dr Lovell does not consider, but he is careful to answer some other doubts that obtruded themselves upon him. Books? They need not be reckoned: they tend to be 'extensions and/or popularisations of contributions that have already appeared in professional journals'. Might not market value have been a better indicator? But then Samuelson's Economics would outrank Samuelson's Foundations. Value added? It is too hard to allocate economists' time between research, teaching and intellectual overhead. (This is rather reluctantly conceded, for has not Yoram Barzel calculated that the consumers' surplus generated for the immediate purchasers of the American Economic Review is $53,000?) The question of an allowance for the quality of articles is also touched on. But, a mathematician who rated 1,995 articles on determinants having concluded that there were five examples of trivia and duplication for every one involving new ideas or results, Dr Lovell draws cautiously back from

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1 M.C. Lovell, 'The Production of Economic Literature: An Interpretation', Journal of Economic Literature, Vol. XI, March 1973, pp. 27-55; with eight research assistants, an IBM 1130 computer, and research support from Wesleyan University and National Science Foundation Research Grant GS 2903.
any parallel effort for economics. Reluctantly and with hankerings to which he returns in his conclusions.

(Professor Stigler has shown that the proportion of articles in leading American journals containing algebra, calculus and/or geometry increased from 5 per cent in 1892-3 to two-thirds in 1962-3. It is patently a pity not to allow for that.) Nevertheless we had better simply conclude that the flow of economic knowledge, lightly smoothed, has risen since 1886 at 5.05 per cent p.a., doubling every 13.7 years. He only gives the absolute figures on a rather small-scale semi-log chart but they seem to have risen from nearly 200 items in 1895 to around 4,000 in 1965.

II

The world's stock of economic knowledge in any year must plainly be measured in the same unit, articles rating the American Economic Association's index. But it cannot be reached by simply aggregating the flow data. (a) There were articles before 1886. Not to reckon these would cause the cumulative total in the years immediately following to rise faster than Price's Law of Exponential Scientific Growth, as exemplified in later decades, would indicate. And (b) Allowance must be made for depreciation and obsolescence.

(a) The first problem is readily disposed of algebraically. Using Price's Law, we can extrapolate backwards to year — α the number of articles that must have been written, whether known to the American Economic Association or not, and integrate forward, to 1886. Answer 1,176.

(b) Though he uses a zero rate in some of his calculations, Dr Lovell certainly considers zero depreciation inappropriate. (Articles written in 1895 or 1915 or 1935 cannot reasonably be reckoned into the 1965 stock of knowledge equally with those published in the latter year.) But granting, without argument, that the true rate must apply from the beginning of time, it is not easy to find out what it is. Dr Lovell uses two: 8.22 per cent p.a. and 24 per cent p.a. How he estimates them will be noted below, but meanwhile (Table 1) there may be summarised the total
stocks of economic knowledge in 1886 and 1965 to which they lead. (Any imprecision in the 1865 totals is again due to his graphic form of presentation.)

TABLE 1

Stock of Economic Knowledge, 1886 and 1965

(Unit: articles)

<table>
<thead>
<tr>
<th>Annual depreciation rate</th>
<th>1886</th>
<th>1965</th>
</tr>
</thead>
<tbody>
<tr>
<td>zero</td>
<td>1,176</td>
<td>80,000</td>
</tr>
<tr>
<td>8.22</td>
<td>448</td>
<td>30,000</td>
</tr>
<tr>
<td>24</td>
<td>205</td>
<td>15,000</td>
</tr>
</tbody>
</table>

What a satisfying thought it is that, whichever estimate you take, any economist who in 1965 knew all economics (say, among so many, Professor Samuelson) was in round figures 75 times wiser than one who knew all that was available in 1886 (say, among so few, Alfred Marshall)! And he is probably 100 times wiser now in 1973.

III

If one thinks about the concepts of the Stock of Knowledge and the rate at which it depreciates, philosophical and logical and literary issues tend to arise. But they belong to the 1930s and are pre-numerate and Dr Lovell eschews them. His views appear only implicitly. As I interpret him he is somewhat torn between two alternative approaches.

A good part of his article is devoted to expounding a fascinating 'citation approach', the rationale of which is this. When an article is first published it counts, unambiguously, as one contribution to knowledge. But it does not stay with unit value, because its subsequent role, its sole role in later years, is to generate new knowledge, i.e. more articles. This it does and can only do by being referred to in such later articles, whether favourably or unfavourably does not matter. Accordingly, under
Dr Lovell's direction a team of research assistants culled all the references made in every third article in the 1965 issues of the American Economic Review and every second article in that year's Econometrica, Journal of Political Economy and Quarterly Journal of Economics. The survey covered 99 articles and, excluding (for reasons too indelicate for close examination) 116 self-citations, revealed 960 citations of which in turn 62.6 per cent were from articles or articles in books, and 30.8 per cent were from books (which, as we have seen, are only articles of one remove). The intervals between each article's publication date and those of the articles cited in it were carefully measured. It appears that the apparent half-life of the average article (measured by the period in which it shows itself alive by being cited) is no more than 5½ years: after that it is half, or more than half, dead and gone. With much subtle algebraic juggling, a depreciation rate of 8.22 per cent a year is inferred, the first of the two rates used in the stock calculations summarised above.

However, as Professor Johnson reminded us, when reproving the sad heresies of Keynes and Keynesians, 'Neoclassical theory is a powerful engine of scientific enquiry but one has to learn how to use it and this takes time and effort, and also commitment to the subject as a serious one'. Dr Lovell has this commitment, pressed down and running over. He has a flow of knowledge, an output, $A_t$; a capital stock $K_t$; and can calculate, in a manner shortly to be described, a labour input (a stock of economists) $L_t$. Hence he can do what all good neoclassical economists long to do: explain the flow and the stock by a Cobb-Douglas production function. (Indeed he and his 1130 do so thirteen separate times.) Unhappily no very good fit is obtained when the 'extraneous depreciation parameter estimate' of 8.22 per cent has been used to measure the capital stock. He finds that a 'maximum likelihood estimator' produced by his computer is better: his 24 per cent rate.

It is perhaps a little sad that, either way, our articles rot so fast from the stock of knowledge. But there is consolation in these alternative proofs of something long believed by modern economists: that in
economics only the latest thing really counts for much, and that there is more of it, inexorably, exponentially, every year.

IV

An analysis of the flow and stock of economic knowledge wholly in terms of numbers of articles might seem, to some, a trifle austere. Happily the necessity, or at any rate the commitment, to explain these outputs in terms of a production function, as already noted, compels Dr Lovell to measure the labour input which contributed its little share to their existence. This introduces a warm human interest to his pages, and indeed tempts him into some sociological by-ways where a précis-writer must refrain from following.

There are two, but only two, measures of the labour input of economists. These are (a) stocks derived from the annual output of PhDs in economics by American universities (available since 1920), and (b) the membership of the American Economic Association (from 1894). As with his use of articles as an index of output, so here Dr Lovell admits with shining frankness that these are not ideal measures. He concedes 'pending the accumulation of additional data' that the fact that these series are limited to the United States introduces an upward bias, and he worries about, among other things, the distortion introduced by the American Economic Association's occasional membership drives and fee changes and the fluctuations in the 'mean BA-to-PhD time lapse' (a poetic concept with elegaic overtones). He does not mention Professor Johnson's important point that nowadays 'a person intent on a distinguished career will top off the PhD with a year or more of post-doctoral study, attempt to obtain a teaching post at a leading graduate school where he can learn from his colleagues, or obtain foundation or university support for part-time research'. However, the principal problems are as before those of finding an initial stock and allowing for depreciation, and they arise especially in the case of the PhD measure (since members of the American Economic Association are already added up, and write themselves off in due course). Depreciation comes in not so much because PhDs are subject, like other mortals, to retirement and/or death
(which is almost negligible owing to the increasing pace of their birth rate), but because 'the techniques of research learned in graduate school suffer from technological obsolescence, and perhaps also because of the pressures of committee burdens', not to mention the decline of effort when 'jobs security increases with advancing years'.

In 1920 stock of PhDs can readily be estimated with Price's Law. It was that which might have existed since the annual output from year — α must have been increasing at the same annual rate of 5.63 per cent displayed since then.¹

Depreciation rates, as before, are more difficult, and to find them Dr Lovell adapts the methods used with his stock of knowledge.

As part of his study of citations his clinically ruthless research assistants measured the chronological and PhD ages (i.e. age since being weaned, pace Professor Johnson, as economists) of all the authors of published and cited articles. The average PhD age of authors at time of publication proves to be 7½ and at time of subsequent citations 14½. After even more sophisticated calculation than before and due allowance for the shining youth of the populations of articles and economists in 1965, it is inferred that the annual obsolescence rate of economists (when defined as American PhDs) has always been a mere 5.04 per cent.

¹ The sufficiency of this Law makes it otiose for the author to mention a collateral support. Had there not been American PhDs in economics, presumably from Harvard, in the 1770s there would not have been the journal articles on which the Wealth of Nations must have been based. The author who extended and/or popularised them was neither an American PhD nor a member of the American Economic Association, but he nevertheless must have existed: his head appears on the cover of this issue of Journal of Economic Literature, gazing away from the contents, and as I write these pages his 250th Birthday is being celebrated.
With scholarly integrity, however, Dr Lovell confesses a doubt that the weightings implicit in his sampling procedure may have here produced too low a figure. It makes excessive allowance for the 'high quality articles and leading authors' which and who are (in another of his poetic touches) reasonably to be supposed 'less susceptible to the ravishes of age' than the normal PhD (who has a quite horrid time in his later years).

He vindicates his own suspicions about this estimate twice over. He shows first that when a Cobb-Douglas is calculated using this 5.04 per cent for the depreciation of economists and the 8.22 per cent rate for their products - alas that we thus outlive our fame! - the regression results are disastrous. The production function shows decreasing returns to scale, and a largely negative exponent for the capital term suggests that the existence of old articles hampers the production of new: both of which statements are obviously untrue of the American academic world to which economic leadership has so rapidly and overwhelmingly shifted. Dr Lovell sadly concludes that 'it is necessary to concede that [the citation approach] has not proved helpful as yet in estimating the aggregate production function'.

He is obliged to fall back again upon a maximum likelihood time series estimate for the depreciation of economists. He finds one of 47.5 per cent. This implies that, properly counted and heuristically speaking, the economics profession has at all times consisted of about the last two years' output of American PhDs. It strikes Dr Lovell as inherently more plausible than lower figures and one suspects that, with due allowance for leading authors, Professor Johnson would concur.

Dr Lovell's Table 2.1 presents the unrejected eight of his climactic achievements, his estimates of the production function. It also gives the original Cobb-Douglas function for industrial production (1899-1922), and Solow's non-farm GNP data version. (They are included, one supposes, in the same prayerful spirit that enshrines portraits of the

1 My italics.
Chairman in every factory, university and asylum in China.)

Whether they embody rates of depreciation for economic output of 0, 20, 25 or 30, and rates for economists themselves of 0 or 47.5, all eight are grist to his mill. They yield, he says, 'parameter estimates which are probably more reasonable than there is any right to expect' as well as 'tentative conclusions' which, like so many in econometrics, 'deserve further investigation'.

VI

Dr Lovell sums up with modesty. He hopes that his work will stimulate other applications of quantitative tools to the study of the history of economic thought. Any history of our profession must, in part, be statistical. (Schumpeter, in 1954, could read all that there was then, but the subject-matter for historians has more than doubled since, and the latest stuff is much better counted than read.) He admits, bravely, that 'the production function construct ... lacks in this application the marginal productivity conditions which buttress its force in explaining aggregate economic output'. He warns that 'the size of the equilibrium stock of articles at any specified date is sensitive to the proportion of his time that the average scholar manages to devote to research activity'. Movingly, he reaffirms his faith that 'many of the results of neoclassical growth theory are directly applicable to the task of explaining the growth of economic knowledge'.

This, of course, is well said. But he could have said more, reaching yet more powerful and substantive conclusions. As these flow readily from observations made earlier in his article it is perhaps permissible to state them here.

Dr Lovell's research activity has been inspired by the excellent work of Derek DeSolla Price\(^1\) on the secular growth of science in general, a serious subject fully deserving much research. Now Price has two laws: one of Exponential Growth and one of Logistic Growth, the first

\(^1\) Among the 33 citations at the end of this article, Price alone receives two: an 'objective quality weight' which sanctions this assertion.
giving way to the second after 'a period of crisis extending on either side of the date of midpoint for about a generation'.

Loyally, Dr Lovell wrestles with the competing claims of these two laws and a little hesitantly concludes, thereby happily excluding the possibility that economics can be in any kind of crisis, that 'the production function approach seems to dominate the logistic in that it explicitly incorporates the labor variable'. But he also has at this point one of his best footnotes (p.35) which, when slightly verbalised, tells us that (a) the logistic degenerates to exponential growth as its asymptote approaches infinity; (b) the Cobb-Douglas degenerates to exponential growth if the capital exponent approaches unity and the labour one approaches zero; and (c) the Cobb-Douglas generates to long-term exponential growth if the labour input grows exponentially - for in this application we have a neoclassical growth model with a savings ratio of unity.

But this (if it be as clear to the present writer as he would wish) indicates that Dr Lovell does not need to make his hesitant choice. For if the capital exponent can be pushed up to 1, and the labour one down to zero (thus preserving the constant returns to scale in this industry in which Dr Lovell has faith) and/or if the economists' depreciation rate can be shown to be 100 per cent, then Dr Lovell and modern scientific economics can be trebly blessed. It can have all three: logistic growth, exponential growth and a neoclassical Golden Age, and what more could be wished? Nor is this just mathematics and wish-fulfilment. For one of his approved capital exponents is 0.990 with a corresponding 0.004 for labour, and in his brave proliferation of depreciation

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1D.J. DeSolla Price, *Little Science Big Science* (Columbia University Press, New York, 1962), p.30, cited by Dr Lovell. Dr Lovell does not cite a reason given in Price's earlier book, *Science since Babylon* (Yale University Press, New Haven, Conn., 1961), p.113: if the exponential growth of scientists continues, we shall eventually have 'dozens of scientists per man, woman, child and dog of the world population'. (It is not insignificant that in the Preface to this latter volume Price acknowledges a debt to Professor C.N. Parkinson of Malaya, who too has laws of high explanatory value.)
rates 100 per cent is not far, in a secular viewpoint, from 47.5, as well as suggested by casually empirical observation of American PhDs.

Furthermore, quite a tiny adjustment to his Cobb-Douglas would have enabled Dr Lovell to kill even more birds with one stone. A suitable non-linear regression package, he tells us, was unavailable for his computer. Had the National Science Research Foundation and IBM not been so niggardly he could, and one may be sure would, have made his exponents dynamic. His capital exponent could have risen logistically from zero to unity while the labour one pursued an opposite course. Wonderfully convincing 'cliometrics' would have been demonstrated. It would have been confirmed that in the bad old days economists wrote books out of their own heads; that there was a crisis in the 1930s when they started measuring and using computers; that as the population of these mechanical aids increased the marginal productivity of mere humans began to collapse; that ever more tape was needed for each article they wrote; and that now, the crisis almost resolved, the Golden Age of exponential-cum-logistic growth is approaching when all the ever mounting flood of ephemeral publications will be spooled forth from computers direct into the American Economic Association's computerised index untouched by human hand, unread, and even counted, perhaps, electronically.

Nor need we be nostalgically saddened by the impending disappearance of merely or nearly human economists. Dr Lovell's invaluable citation approach shows that some leading authors of high quality articles will survive. He even tells us who they are and the citations they will receive, growing at 5.05 per cent a year from the 1965 benchmark. They are: Milton Friedman (24) and (8 or more) Samuelson, Solow, Arrow, Hicks, Koopmans, Thiel, Tobin, Griliches, Klein, Schultz and - cheers for down-under! - Johnson.

\[1\] Sampling errors, admitted by Dr Lovell, perhaps account for the presence of this civilised Englishman. But, no distinction being made (as we have noted) between favourable and unfavourable citation, Keynes is there too, lower down, with six, of which five, as Dr Lovell is careful to note, were in the Journal of Political Economy.
There is so much, as yet untouched, in Dr Lovell's article that deserves extension and/or popularisation, so many more pearls to nose out, that one could write a book about it. But this article must at last come to an end, and with what more appropriately than a plea for further research? Dr Lovell having shown that research into economics as a human activity is obsolescent, and having so nearly exhausted research into research, I submit a problem in a yet higher-order science, research into researchers in research.

Is Dr Lovell, or is he not, wholly serious? Several consultants, all Ph.Ds of quite recent vintage, think he is. My own view\(^1\) is that he has written the best dead-pan spoof by an economist on contemporary intellectual fashions since Whately's *Historic Doubts* (1819), and deserves an equally unravished immortality.

\(^1\)Reached after blush-making delays for which this laborious tribute is my expiation.
Let us imagine a youth who is entering a university - any university, anywhere - and choosing a subject for study. He has more than a meal-ticket in mind, and he does not particularly plan an academic career. But he has the intention of remaining interested in later years, as more than a hobby, in the subject of his choice.

Since it is 1976 he has been hearing about the Wealth of Nations and economics seems a possibility. But he is not at all sure what has happened to the subject over two centuries or how he will find it treated in his university. He consults an ancient of his acquaintance who came to the subject about half-way through the seventy years that have passed since Marshall was allowed to establish a separate Economics tripos in Cambridge - the word went round that 'it is time that Alfred had a little hell of his own' - and who, after watching recent developments has recently abandoned it for gardening and regrets. It is a case of si jeunesse savait, si vieillesse pouvait. As is proper in such cases they discuss the matter at length. The outcome is an oration from the young man to his future teachers, delivered with all the brashness nowadays expected of the young.

It runs much as follows.

II

'Gentlemen

'Not knowing what you teach as economics here or how you teach it, I venture to tell you what I want to start learning. I will first, briefly, define the subject as I wish to find it, in the broadest possible terms, and then,
Definition. I am told that two views of the scope of the subject persist among present-day teachers. Some following the older tradition take it to cover men's activities in that part of the ordinary business of their lives in which money and markets play an important role, and also public policies of all kinds that impinge upon those activities. Others, in a more recent tradition, regard it as the scientific study of the rationale of intelligent choice when means are scarce and ends numerous. When I first heard this it struck me that - since for one thing everything takes time and time is certainly scarce for each of us - the second definition would prove too wide for my capacities. But after it had been explained to me that the proponents of Scientific Economics use language in ways different from those of other people, it seems to me too narrow.

Apparently they do not mean by "scientific" what most of us would expect: the cool impartial collection of any kind of fact, hard or soft, relevant to the matters to be discussed. They only admit hard "objective" facts of an overtly quantitative, measurable kind. Hence they exclude all observation of the conscious psychology, private or social, of economic agents. Further they do not mean (as others do) by "rational behaviour" the kind of decision-making entailed in first distinguishing and comparing the expected outcomes of all relevant possible actions and selecting that which, by some accepted and pre-examined criterion, is the best. It would be necessary, if they did that, to admit that most of our decisions are not rational and then their science would either have to be confined to the tiny fragment of our behaviour which is rational (and be prefaced by identifying this fragment), or it would degenerate into speculation about imaginary, though maybe ideal, modes of behaviour. They escape this dilemma, I learn with alarm, by the trick of asserting it as an axiom, not to be debated, that all behaviour is rational, though sometimes ill-informed, and proclaiming the science of "revealed preference". By this semantic jugglery they can construct a fake psychology that is implied by actions and employs language also used in real psychology; they can apply it to any topic for which a supply of statistics can be concocted, and they can, and
I am told do, trumpet like anything about the superiority of a mindless economics over one in which the mind is observed.

'Gentlemen, if there be Scientific Economists among you I must go elsewhere, for two reasons. First, I wish to learn about economic psychology for its own sake, and as a necessary foundation for both positive and normative economics. And, second, I do not trust myself (or if I may say even you either) not to get into a welter of muddle and delusion in a group where some are arguing from real mind to action and others from action to artificial imaginary minds, and where such basic terms as science and rationality are being simultaneously used in diverse and contradictory senses.

'Permit me to assume that your views of the scope and method of the subject lie within the limits of the older traditions of the subject. Then I have still some observations to make about the contents of the different parts of economics and the balance between them as I wish to find them here. The subject shall, of course, have two main divisions, positive and normative, and I start with the principal sub-divisions of the first: descriptive, theoretical and applied.

III

'Descriptive. Naturally I am alarmed, as well as excited, by the prodigious variety of hard and soft facts encompassed by economics (and the breadth of the gradation between the economic and the non-economic). Naturally I wish to generalise, and to have theory derived from generalisations which, when applied, will impose a recognisable order upon the chaos of economic events, past, present and future. Nevertheless I must from the very outset of my career learn facts, lots and lots of them, and my interest and delight in them must be fostered by the integrity, skill and taste with which you (who have been among them so much longer than I) bring them before me during the years in which my appetite is liveliest, my learning capacity at its best, and I am most easily cheated by fanatics and doctrinaires.
'I must have a great deal of economic history. In my little scramble from the cradle to the grave the world will change about me, for good or ill. I cannot begin to understand the trends of events about me unless I see them in the context of a long evolution. Besides, I cannot properly rejoice in my luck or find consolation for my misfortune in being here for this one brief spell among all others unless I can vividly picture what went before. Now is the time for me to acquire that sense of distance and that appreciation of the littleness of any direct experience that I can have, which mark out educated men.

'Needless to say I must have much about contemporary affairs also. But one little patch of these will be always around me, and my own eyes and ears will show it to me unaided. Hence what I want especially will be an account of the larger social framework, the aggregates and the structure too large to see for myself, and information about parts of my own country's economy and about other economies that I am unlikely ever to see at close quarters. I wish to learn the extent to which what I see familiarly will differ from what I do not see and to avoid judging the world by the affairs of my parish.

'When I say information naturally I do not mean only statistics: though I must of course so swat at them as to develop an "instinctive" sense of orders of magnitude. I do not want to load my mind with numbers, and will be entirely content to learn how to look them up. What I especially seek is a knowledge of the range and variety of the ways men take economic decisions, individually and within organisations. I must get, too, some appreciation of the place economic affairs have vis-à-vis non-economic in the lives of my contemporaries near and far in space and time. Obviously this is elusive, prismatic, indefinite, literary stuff, all too conveniently apt for sociological waffling and hazy generalisation. But please make it as concrete for me as you can by letting me inspect detailed accounts of particular people and places as vivid as can be found. And may I, please, see as much as I can for myself. Visit factories, stay with families outside my circle, be helped to take temporary vacation jobs outside the likely scope of my adult life, share in surveys, attend board meetings, sit in parliamentary galleries, supplement book-learning in every way you can
manage for me. I do not wish to become a pedant peering out at reality from libraries and classrooms.

IV

'Theory. I have been assured that you will certainly not raise any objection in principle to assisting me towards this descriptive knowledge but that you may intend to treat it as something merely consequential and subsidiary to economic theory, pure and applied. These branches of positive economics, I have been warned, may be so swollen as to occupy the great bulk of your students' time. Lest there be any misunderstanding between us I must explain to you the place I intend to give them in my studies.

'Like everyone else luckily - or unluckily - endowed with the intellectual energy that takes them to universities I long, not only to know, but to understand; to discover how to explain, to predict, to see the actual, past, present and to be, as the exemplification of General Laws. (And like them I impatiently refuse to resolve the contradiction between this conviction of Determinism and their other conviction of Free Will which I also share.) But just because I delight in the (relatively) simple processes of knowing, am self-conscious about my own experience, and curious to observe and sympathise with that of my fellow-humans, I am shy of this second stage of generalisation, systematisation, classification, abstraction, rationalisation, explanation, prediction, scientification, polysyllabilisation. What multitudinous masses (or clouds) of economic phenomena, hard, soft, diaphanous and even gassy, there are to explain and predict! And how mixed up they are with equally hard, soft, diaphanous and gassy non-economic events! What a sea of words I must plunge into and how thick it is with the detritus of a million forgotten books and articles! Before I slide in, dressed in your second-best wet-suit and your spare oxygen-cylinder, I want to be confident that you will lead me to those beds of pearls that I would delight to rifle.

'If you can credibly assure me that you have found them, I will joyfully follow you even if the journey be so long and arduous that I should postpone some of my "descriptive" studies. (Equipped with your pearls as touchstones the later collection of factual truth and the
discarding of delusions would be greatly accelerated.)
But have you found them? This is what worries me. I
have been listening to the most distressing tales about
your activities.

'They say that theory has become exceedingly rigorous
and mathematical and that, though economics is not yet
entirely closed to those who come to it without a
mathematical training, the rest have to spend much of their
time in universities acquiring that training, simply in
order to understand Modern Theory.

'The great bulk of this theory, they tell me, consists
of the analysis of rational, well-informed, selfish decision-
making, assumed to extend over the whole range of economic
behaviour (the extent of which in the totality of human
action is undiscussed but tacitly supposed very wide,
including everything measured in the GNP). Most of it, I
am told, abstracts from the passage of time and deals,
with the greatest elaboration, with moments in which
millions of these anthropomorphic computers acting
independently dismiss myriads of alternatives in a flash
and find a single optimal Equilibrium Solution. But a
part, vast in itself, minutely scrutinises another class
of dream worlds in which there are almost never more than
two kinds of factor making one or two kinds of commodity
in conditions so rigged that everything grows, to
eternity, at constant rates either from the arbitrarily
described starting point or after a little settling down.

'These scholastic fantasies are, they say, regarded
as the apogee of two centuries of theoretical endeavour.
They lie at the frontiers of knowledge and the little
titivations, the translations into more sophisticated
brands of mathematics, the little "generalisations"
from one set of crazy postulates to another believed
infinitesimally less so, upon which the leaders of
theory spend their time, are presented as the triumphs of
intellectual progress. I am warned that it will be your
pride to take me to this frontier, and keep me apprised,
when I am advanced enough, of these latest little nibbles
being made at hitherto unimagined tracts of Cloud-Cuckoo
Land beyond.

'I have protested that this must be wrong, that in a
world of sane men these things cannot be. But it has been
argued that they are, for reasons that sound plausible. Modern economic theory, it has been explained to me, arose in mid-Victorian times, when analogies with the mechanical and exact sciences were all the rage in the dawn of the social sciences, and mathematics accordingly had a high prestige. It was founded by an English metallurgist who had little mathematics and no psychology (Jevons), a French doctrinaire in the same case, a dear obsolete silly-billy of the first water (Walras), and an aristocratic Italian railway engineer of brilliant intellect and raging temper deeply contemptuous of the entire human race (Pareto). Between them they concocted a great web of abstract reasoning with the grandest pretensions. Its psychological foundations were appallingly weak, a crude Benthamism borrowed without scrutiny, and its mathematical structure was still incomplete. But it is easier to elaborate a superstructure than to dig in a boggy subsoil, and in the next generation, the progress of specialisation and the rise of pedagogics caused the foundations to be forgotten while university careers in economics came to be made, and pupils dazzled, by the endless polishing of the unearthly superstructure by men who knew theory but left themselves no time to know anything else. That at least is the tale I am told.

'If these transparently false and artificial pearls be all that you can offer me why should I so labour to follow you down to them? And if you have come sincerely to believe them the real thing, then, gentlemen, you must all be suffering from the bends.

'If I am to understand, explain and predict as well as know, and to use conditional predictions in my efforts to improve the world about me, I must have theory. The world is too complex for unaided commonsense. That theory must be spun out of simplifications I grant in advance. But they must be good simplifications, not leaving many big things out, and I must be taught what it is that they leave out. I forgive the founding fathers for missing out too much and not fully recognising what it was that they overlooked: what is progress in such a subject as this but a widening, deepening and thickening of basic theories boldly advanced in times of relative ignorance and in a much simpler world than that now around us? I can have no time for a version of classical theorising which has been narrowed, shallowed, and thinned out, in the name of rigour, into a patently preposterous mythology.
'If this is what you offer me I must have permission to neglect your theory classes and get on with such theory as I find relevant in the older classics and the work of those who remain in their tradition and my own cultivated sense of observation. 

V

'Applied Economics. I am thus fussy about the theory I can get here because I wish to use it. The same ambition, I am told, inspires you. But as with your theory I have had some warnings about your applied economics and here too need some reassurance.

1 I am surprised to hear that in much of it you do not really employ theory at all, or only in the trivial use of suggesting the kind of regular relationships between aggregates that you should look for (most of which would be suggested by commonsense anyhow). You simply hunt such relationships between a handful of aggregative series. Given my suspicions of your ideas about theory this procedure interests me and I wish to learn about it not because it can lead to explanations but because if it works, it is obviously excellent for prediction. But I do not want to spend much time on it unless you can show me that it has often been successful in prediction, more so than less laborious procedures. Prima facie it strikes me as odd that the overall outcomes of the myriad activities of millions of muddled emotional sentient beings struggling through lives that are long successions of hopes and disappointments and surprises can be described by little clockwork toys with only three or four moving parts. I have heard of the ghost in the machine but this seems to be a case of the machine in the ghosts.

2 To surprise is added panic when I am told that in another, and larger and more reputed, part of your applied economics you start from the presupposition that your elaborate pure theories of equilibrium states are exemplified in reality though disturbed by random error and the irrational interferences of government, and accordingly view applied economics as measuring up the parameters left unquantified in
the algebra. I gather you have been led into this procedure by first taking the narrow view of the logic of economics to which I referred at the beginning of my speech. Having decided that to discover whether man be rational, maximising and well-informed by psychological observation is too difficult (and not your specialism either) you have decided to assert as an axiom that they must be, these being the postulates that allowed the development of modern pure theory. The best that applied economics has then to do (in your view) is to argue back from what men do, your statistics of the market, to the particular sets of tastes and attitudes and technical knowledge they would have had to have had for them to do what they did in this rational maximising way. The descriptions of those tastes, etc. that best fit the facts (have a minimum spread of errors) are then the fruits of your applied economics, and they appear in the guise of more or less aggregative production - and consumption - functions often with a time element incorporated to deal with facts that cannot otherwise be tortured to fit as closely as you require that they should before you proclaim success. You set no limits on the kinds of place and time to which these methods can be applied. You will tackle long spells of history, advanced economies, primitive ones, the future. Policy problems can, you believe, be measured up: any quantity under public control, the volume of money, the rate of interest, taxes, education, tariffs that you fit in can be varied and your equations will tell what is to happen, how prices and outputs and incomes will react. And all this without a moment of enquiry into how men actually think and feel! Unless the error term is its proxy these machines have no ghost in them at all. And, I am told, though they often break down after making loud clanking noises, you are ever hopeful of using yet larger computers and yet more data to make bigger, better, quieter ones from which the last shred of humanity is removed.

'If there be any truth at all in this tale, just as I have asked for your permission to keep out of your theory classes, so I must have your permission to cut all but the simplest model-building in your econometrics. It would be discourteous of me to assert that you have all gone mad:
perhaps you really are at the frontiers of knowledge. But these, it seems to me, are arid, rocky regions where stronger men than I can perish in a chaos of hallucinations.

'Let me stay near where my ancestors have lived and worked, and let me learn to adapt their Augustan wisdom, their modest tentative generalisations from the observations of every-day life, to the world that evolves about me. I promise that when their kind of theory seems roughly to account for new sets of facts, I will be only modestly pleased because I shall only have started on the way to assess the factors their theory omits. And when it fits too well I shall be positively nervous: something must have gone wrong and all that I will know about where to start looking is that it will not be in algebra.

VI

'Normative Economics. Being young I am a prig. I wish the economics I learn here to be not only interesting but useful to me all my days. I wish it to improve not only the quality of my private economic decisions as an individual, but also the quality of my contributions to public policy as an active citizen, and to be correctly believed to know more of economic affairs than those not trained in the subject, and accordingly to be trusted by my friends. If you allow me enough descriptive economics I hope the wisdom of my private life will be increased - at least I shall lose the temptation to believe myself rational and well-informed and acquire some sympathetic understanding of other people's economic experience - but leave that to me. Here, I have only some remarks to make about what I hope that you will teach me about public policy.

'You shall, of course, not tell me what policies I should espouse. Any stance on policy involves moral attitudes, and these are my private affair. It involves too a view on what is politically practicable and what the consequences of advocacy and activity will be to the advocacies and activities of others, and you are not political scientists. Besides I will only achieve political weight in years to come and you know the future no more than I. You must be cool about social issues: there is plenty of heat outside.
'I say that with hesitation and apology. But I cannot help noticing that some professors sign manifestos at elections giving their university addresses and I have heard of promotion quarrels in which assertions of political creed are claimed to be relevant. And I have been told by one who has read Professor Harcourt’s lively surveys of the disputes of pure theorists that they even accuse each other of choosing between two-sector models in the idiot conviction that such toys can have a tendency to justify laissez-faire capitalism or socialism. If I find such tomfooleries here it will be the last straw.

'Nevertheless there is much that you can help me with. I have the inevitable inexperience and innocence of youth in all political matters; there is a din of fanaticism and flapdoodle all around me, and economic issues, I am told, underlie most of the mass murder and misery I read of daily. Help me towards a sense of reality! I want in the descriptive part of my reading and lectures details of past and present legislation and its administration, an awareness of what it means in the practice of daily life in more than my own type of economy, warts and all. I want some of the politics of political economy: how do pressure groups operate in practice? And since I keep hearing about the splendours of revolutions, what are these like to those who live through them? If there be such things (other than in the creed of the Marxist religion), tell me about theories of the determination of economic policy – and let them not depress me by being altogether deterministic. Though, as I say, I do not want your moral or other verdicts, assist me at least to the detailed analysis of the concrete significance and practical interpretations of the large ideals I hear so much of, equality, freedom, etc.

VII

'To sum up I want you to lead me into economics as one of the moral sciences, dealing with the feelings and aspirations of ordinary mortals in one large tract of their daily lives, one indissolubly linked and only arbitrarily distinguishable from the rest. It must therefore be (still) a largely literary study, much concerned with the subjective aspects of life that only words can approach. If that means it is not a science, so much the worse for science.
'That some measurable objective entities exist in it is, as I understand it, most fortunate. It gives its students an occasional opportunity to retreat into something like the simpler world of the natural sciences, and occasional relief from the task of human sympathy and understanding, occasional, if remote, analogies with mechanics and an occasional excuse for mathematics. But of course to linger too long in these little corners of the subject, contemplating cobwebs, would be disastrous to my education. They have their place - in the corners.

'That, gentlemen, is how I see economics and the pattern of education in it that I seek. Please tell me whether you agree. If you do not, please try to persuade me that what you offer is a superior article. And if you do not succeed, forgive me if I slink sadly away. I may remain interested in the subject as I interpret it, but I will be an amateur and you will be professionals. We need not meet again.'

VIII

Here, at last, the young man shuts up. An embarrassed silence certainly follows. But then?
ON GETTING RID OF ECONOMIC MAN

I

This paper is devoted to defining and defending a single proposition: that 'Economic Man' should be removed from his present position, long held, as the foundation-stone of economic theory and replaced, when they have been found, by other less misleading models of economic psychology.¹ This is a large round proposition and will be discussed in terms of large round generalisations. Since summary statements are never wholly true, the reader can be invited to do no more than decide whether he thinks them more true than false.

¹A most offensive comment upon it was presciently prepared by Adam Smith in an early essay of about 1750, his History of Astronomy.

'That the imagination feels a real difficulty in passing along two events which follow one another in an uncommon order may be confirmed by many obvious observations. If it attempts to attend beyond a certain time to a long series of this kind, the continual efforts it is obliged to make, in order to pass from one object to another, and thus follow the progress of the succession, soon fatigue it, and if repeated too often, disorder and disjoint its whole frame. It is thus that too severe an application to study sometimes brings a lunacy and frenzy, in those especially who are somewhat advanced in life, but whose imaginations, from being too late in applying, have not got those habits which dispose them to follow easily the reasonings in the abstract sciences. Every step of a demonstration, which to an old practitioner is quite natural and easy, requires from them the most intense application of thought. Spurred on however, either by ambition or by admiration of the subject, they still continue till they become, first confused, then giddy, and at last distracted.' (my italics)
A summary of summaries will indicate the plan of the argument. Section II: economic theory has long been and remains based on the postulates of Economic Man. III: it is still right to have simplified models of economic psychology in this position. IV: but they must be good ones; and V: Economic Man is bad. VI: guesses can be made about the directions in which replacements might be found. If these proved correct, the general structure of economics, both positive (VII) and normative (VIII), would be much affected, and its place in the family of social sciences clarified (IX).

II

As a technical device for use in theoretical and applied economics - in all-purpose organon, scientific tool, first approximation, basic model (call it what you will) - Economic Man was first put together by Jevons when he extended and generalised Benthamite Utilitarianism to cover the whole range of individuals' decision-making in their economic activities and translated this vision into the language of mathematics. John Stuart Mill had defined the concept in a celebrated essay forty years earlier, but he had explicitly excluded consumption decision from the ambit of his 'wealth seeking' model and, intimate though he was at the time with Bentham himself, he did not use the language of utility. The completed account presented a superbly compact picture of a rational calculating being who, within the limits of his knowledge and subject to being obliged to concede probabilities rather than certainties in some matters, successfully maximised his net flow of utility over any period you cared to consider. This vision of human efficiency (so flattering that it became, as Keynes remarked, an element in the complacency of the age) proved almost instantly irresistible to the scientifically-minded. It was logically clear sharp-edged, and quantitative and it provided a mathematical sub-structure for what had hitherto been an overwhelmingly literary subject. At last a moral science could look the natural sciences in the face and turn its back on the neighbouring social sciences which continued to conduct their affairs in prose. Above all it promised great webs of rigorous deduction linking the sharply-defined individual atoms together to yield a culminating account of the whole economy as an equilibrium infinitely more complex and sophisticated than that of the Ricardian system. To this
day economics is saddled with Economic Man as the one and only fully coherent and precise account of economic psychology that we possess, and with equilibrium as the only fully-developed description that we have of the possible state of the economy as a whole.

Naturally, even those economists who combined enthusiasm for the world of rigorous analysis, which Jevons and Walras opened up, with concern for the validity of its premises have had qualms about the mechanistic crudity of this model. Marshall, whose feelings about it were quite extremely mixed-up, was especially distressed by the postulated selfishness of the little creature. But not much redefinition and not many more equations are needed to deal with that. Cardinal utility is hard to swallow: but ordinal will do nearly as well. Inter-personal comparisons of subjective experience plainly lie outside science: but a Social Welfare Function conveniently handed to us from outside our profession will take their place. Finally, with the aid of Samuelson's consistency postulate we can convince ourselves that we can use the postulates of Economic Man without making any assertion whatever about the conscious processes of his decision-making.

As a model of economic psychology Economic Man has, indeed, become a very desiccated affair these days and (as F.H. Knight once indignantly recorded) we are ashamed to call him by his proper name. But he is still, I submit, the foundation of our theorising, the totem of our tribe. To be able to manipulate his skeletal remains in the right algebraic fashion remains the badge of our professionalism as theorists. It is the pride and joy of many applied economists to show that, when provided with putative information and fleshed out with empirically observed action, populations of these little mannikins would do just what real men of apparently quite different mentality are seen to do - and this, it is held, proves real men Economic Men after all. A proper respect for Economic Man, and a proper contempt for anything inconsistent with him, is Scientific Economics.

III

It is entirely possible to conceive of an economics that does not concern itself with human consciousness at all.
In aggregative econometrics, whether it deals with single markets or the whole set of them as an interconnected whole, the student seeks regularities in the quantitative totals of objective events, prices outputs, etc., and has no truck with the thoughts and emotions of individual agents.

Nor is there anything to prevent us from investigating individuals' economic actions in a wholly behaviouristic way: hunting laws determining these actions in terms of objectively observable facts about the situations in which they are taken, not only facts that are plainly part of the explicanda, prices, incomes, etc., but any others that may be relevant, age, sex, climate, etc. Though in fact most decisions are consciously taken there may indeed be objective variables tightly correlated with the subjective ones. This was the methodology advocated with the utmost care in two vast volumes entitled Economic Man in relationship to his natural environment (1948) by Reinold Noyes, whose ideal was to track the economy back to the facts of neurology and physiology, setting consciousness altogether on the side.

To object to econometric studies, whether macro-economic or micro-, would be at once obscurantist and certainly vain. If they ever succeed (in more than a superficial way) their interest and utility are unquestionable. But for two reasons they can surely never be allowed to become the whole of economics.

In the first place even contemporary economists, and among them even those most devoted to aligning their subject with the natural sciences, have an invincible and irrepressible interest in conscious experience. (They are human after all.) Hence they cannot refrain from interpreting the mindless automata they construct in terms of the conscious minds they are known to possess. The whole doctrine of 'revealed preference' is no more than a pretentiously expressed excuse for their inventing a conscious psychology that would fit the objective facts. It warrants an exercise in fiction; composing the set of conscious knowledge, of known facts and tastes and emotions that a rational calculating well-informed man would have to possess if he acted in the way described - and composing this without the slightest vestige of enquiry into the actual knowledge, thoughts and emotions of the actual agent. It is a trick of arguing from act to preceding thought: a
kind of Alice Through the Looking Glass mirror image reversal of the traditional approach (also the fact of daily life) of arguing from thought and emotion to act. When half our profession are arguing in the one direction and the other in the other we all go round in dizzy circles and forget that, if we are to talk about the human mind in a professionally responsible way, we should check both new fantasies and old generalisations against careful observations.

Second, economists are concerned with policy; policy deals with the attainments of more rather than less desirable economic states; and whether one is more or less desirable than another depends upon the conscious experience associated with the alternative sets of prices, incomes and outputs. If we are to open our mouths at all in policy discussion we must know about the conscious experience at issue, however coy we may be about the criteria for its ethical evaluation. We have no exclusive rights over the observation and interpretation of economic psychology, but we have a duty to share in this work.

I conclude that, if it is to remain in contact with reality, the theoretical foundations of economics should remain rooted in generalisations about the conscious behaviour of economic agents.

IV

It is unnecessary to argue that the human mind is so various, fluid, complex, mutable (etc.) that any account of it made for general use in explaining, predicting and planning economic affairs must be a model rather than a description in the ordinary sense. We have to generalise, abstract and simplify. But there is a corollary that we sometimes forget: that in using the model for some practical purpose we have to have some idea whether the possibly relevant factors that we have omitted, simplified, or underplayed may have real importance on this particular occasion. We have to know that we are using a simplified model and be alert for signs of the ways in which it distorts our understanding.

It is proper to be appalled by the difficulties of constructing a model that will be of very widespread convenience. If we try to pack too much into it, it will become too cumbrous as a basis for abstract argument, and
too demanding for data: we will never get down to business. Or, if we leave too many and too often important factors out, other dangers lurk. There may be so much to 'allow for', so many amendments to be made 'by eye', by 'good judgment', 'common sense' and general knowledge, that our final conclusions on any practical issue are effectively divorced from our would-be 'scientific' beginnings. Our professional preliminaries were a waste of time and our conclusions should carry less weight than the horse-sense of untrained men with extended experience of the area of affairs under discussion. Or, blinkered by our theorising, too pleased with our professionalism, we may forget or belittle what we have left out, and become doctrinaires, convinced that we know more than we do - perhaps convincing others too if they swallow our jargon on the principle of omne ignotum pro magnifico.

If we landed ourselves with a thoroughly bad model, it might actually come about that we suffer all these fates at once. Suppose that for years and years we trained our medical students on very complicated clockwork dolls designed to simulate with elegant precision only some human functions. The cleverest students might go on to spend their lives in the hospital workshop devising ever more exquisite automata and never get to practise at all. Others, less mechanically-minded but far from incapable of human understanding, might abandon or be rejected by a profession in which they might have done much good work. More, having laboriously learnt to manipulate dolls to the satisfaction of their teachers, would be let loose upon the public. Of these some (it is to be hoped) after forgetting their training would eventually become happy amateurs. Proud of their exotic skills others would systematically prescribe for the diseases of reality the remedies appropriate to dolls...

I believe Economic Man to be such a doll.

V

When at all closely inspected, the generalised account of economic decision-making offered by Economic Man has the peculiar quality of being, simultaneously, elaborate beyond the powers of any normal imagination and simplified beyond recognition.
In a poor, simple slow-moving economy the inhabitants of which, though literate and numerate, have very limited options open to them and these circumscribed by a strictly conformist moral code - in Glasgow 1776, say - it is just about possible to picture canny men conducting their economic lives in the manner described by the model. At the outset of their careers they could consciously plan their choice of occupation, their hours and methods of work, their earning, their patterns of expenditure, their savings and their consumption, for the present and later years, in a most efficient way, allowing for well-measured risks when outcomes were risky, but, by and large, foreseeing correctly and rarely regretting retrospectively the streams of conscious experience they have arranged for themselves. Whether in such circumstances such men have in fact ever existed - or anything very like them - is another matter: but at least the model is imaginable and were we to be able to cross-examine the inhabitants of such a place, or merely know them well as fellow citizens we could see in what way reality and model diverged.

It is altogether otherwise with a rich dynamic liberal economy. There thousands of occupations are available, and more every year. There are thousands of consumer goods, and new ones every year, many, the complex durables especially, yielding unforeseeable streams of future experience. There are thousands of vehicles for savings of which the future appreciation or depreciation no expert can foretell. Uncountable varieties of economic experience are open to everyone. Here this kind of decision-making is flatly unimaginable. It is one thing to set out in a page or so the compact set of equations that the utility-maximising or preference-ordering agent will solve (with a little row of i=1..n for a smudge of subscripts). It is another to fill this out with a vision of the actual mental processes of the normal agent of which the algebra purports to be a summary account. But this is the impossibility we are supposed to perform when Economic Man is taken to be a psychological model. No one would quarrel with an account of the manner in which a careful housewife bought the week's groceries on a fixed budget in which this simple repeated operation was described as conducted in a well-informed, calculating way. It is the extension of this to the whole range of her family's decisions over many years, with all the interdependencies and uncertainties allowed for, that is the absurdity that underlies almost the whole corpus of economic theory.
Were the model (per impossibile) imaginable and we sought to compare the tale it told with the realities of the decision-making of ordinary folk over a decade or so of their lives, the list of omitted commonplaces of everyday life would be found to be quite intolerably long. It contains no learning, no forgetting, no blunders, no impulsive decisions (made virtually without thought), no imitative decisions (made on unquestioned and possibly unintended recommendations from half-known exemplars), no adventurous or experimental decisions (made to see what would happen), no developing or fading tastes, no flow of surprises and unintended and unnoticed consequences, no accumulation of regrets at opportunities rejected or unperceived. The muddles (seething or stagnant) in which we lead our economic lives have been washed, sieved, purified, rearranged and reduced to a coherent clockwork mechanism from which all humanity has been squeezed out. Even if we could get to the theoretical starting point we could not get back to reality by adding back what has been taken away.

The twin vices of Economic Man are that he was designed to deal with the affairs of a moment rather than a period of time and that his postulates embody a wild exaggeration of the rationality of the individual at that moment. Both the flow of time and the wavering stupidity of mankind have somehow been conjured away: the two features of his existence, precisely, that promise some usefulness to the study of economic affairs.

VI

The only proper procedure by which one or more replacements for Economic Man should be sought would be to undertake long, wide and systematic empirical enquiries into the conscious decision-making of our contemporaries; the enquiries neglected by his creators and several generations of those who have used him. A second dose of casual empiricism and sweeping generalisation is no proper remedy for the ill-consequences of the first. But it is the writer's experience that most even of those who are prepared to concede that the reigning model is a mess go on to announce their intention of continuing to use him (under wraps) until an alternative is provided. The reaction is so widespread that, though it is to my mind both lazy and irresponsible, some tentative and deliberately vague
suggestions may here be offered about the kinds of alternative that serious studies might throw up, and, in the two following sections, the kind of reconstruction of economics that they might entail.

1 If we take a time unit long enough to contain samples of all the main classes of any individual's economic decisions - those about earning, consuming, saving, adjusting his capital stock, etc. - we will find that this set (or set of sets) is never taken as a coherent whole. It is an incoherent series, containing at most some coherent groups. Furthermore the amount of clear thought (of specification of alternatives, of imagination of outcomes direct and indirect, immediate and longer term, etc.) that goes to each of these decisions will vary greatly, and in effect continuously in any large sample. A necessary step in constructing a manageable model will be to classify these procedures into a number of discrete types: say, calculated (the only kind known to Economic Man), imitative, habitual and impulsive.

2 In each functional area of his economic activities the proportions of his decisions taken in these various ways will vary during his life. He will certainly, for example, clot up with habits as he ages.

3 The proportions and 'locations' of these different kinds of decision-making will vary endlessly from individual to individual. Nothing approaching the persistent universality of calculated decisions that defines conventional Economic Man will however ever be found. No single model will be capable of construction that is adequate for any economy or even sector at one time or over any substantial period of time. (And we will have always to remember in thinking of models that no theory built out of them is going to be of serious practical use unless it can handle substantial sequences of time: there must be a ban on comparative statics parading as dynamics.) It will be necessary to devise a little set of discrete New-Model Economic Men, to one or other of which the great majority of real world agents can be provisionally assumed to approximate without gross distortion. (In the preface to his Principles Marshall promised that he would 'lay stress on the fact that there is a continuous gradation between the actions of "city men", which are based on
deliberate and far-reaching calculations, and are executed with vigour and ability, to those of ordinary people who have neither the power, nor the will to conduct their affairs in a business-like way'. If it be the case, as I fear it is, that he failed to honour this promise in any way that his readers grasped, the explanation lies, I suggest, in the excessive difficulty of applying his favoured Principle of Continuity in this area. To have one model only, and that a caricature of a City Man is intolerable; to have an infinity is unmanageable; we must settle for two or three.)

4 (Here my guessing is peculiarly hazardous.) Maybe three types would suffice: (a) Traditional, one largely bound by habits early acquired and not readily broken, reacting only slowly to changes in the economic environment and then in an imitative way; (b) Imitative, one alert to copy the procedures of some exemplary group until habit settles in; (c) Businesslike, one keen 'in office hours' to increase income and wealth, exhibiting in that sector of its affairs much rational calculation when this is practicable, subject to the neurotic rules of 'animal spirits' when it is not, but, outside 'office hours' largely imitative. Needless to say, these types - or any others - would need a great deal of further definition before they could be used in the abstract construction of accounts of the state and motion of any economy of a kind as determinate (but not more determinate) as such accounts should be, and before consequential theory could be tested in application.

5 At any one time different economies will have different proportions of these different types of agent.

6 These proportions will usually be changing over time. (When the development economist gropes for a distinction between development and growth and for a concept of 'modernisation', this may be the elementary truth he is after.)

Were these guesses in any way confirmed by serious empirical study, or anything like them, we would be obliged to reposition economics on very different theoretical
foundations, and much of the vast rambling structure in which we wander would end up looking very different (though I hope altogether more stable). Parts of the old place would vanish or need a thorough rebuilding; much would remain, some large new wings would be added. Piling guess on guess, I sketch what might happen, first to positive economics and then to normative.

VII

Large tracts of pure theory would disappear. All those acres of rigorous analysis depicting the momentary equilibria of utility-maximising individuals and of markets and whole economies - and two linked economies - wholly composed of these dolls would retreat to the museum shelves. So too would all the stationary and spreading stationary states that until quite recently were the only meticulous analyses we had of events over time. It would be vain too to persist in the efforts, for forty years so remarkably abortive, to devise models of economies in which per capita growth and equilibrium (in the sense of satisfied expectations) are combined - and with them would go the craziest of all novelties, the cliometric fantasies in which whole centuries are fitted to aggregative production functions.

But we would not need to discard the ordinary apparatus of supply and demand curves. Even the frequency of habitual imitative and impulsive acts will be affected when, on the verge of decision, the agent finds prices and incomes other than he had vaguely expected.

Nor would we have to abandon the hypothesis that the business sector, the network of enterprises selling to the aggregated market of individuals and households (and other enterprises), is approximately in temporary equilibrium. At least in advanced economies, business managements could still reasonably be supposed to be conducted by 'business-like' types who can quite accurately calculate the costs and sales possibilities of production for immediate sale. (However, the elements in present cost that are indissolubly linked with the longer term would have to be recognised as calculated in a mainly conventional way: in a dynamic world depreciation defies rationality.) Only the extended
type of business equilibrium in which longer-term calculations are rationally and mostly correctly made would (with all kinds of personal equilibrium) retreat into the museum. We would therefore still inhabit the world of the General Theory, though shorn of the vestigial references to utility that mar Keynes's definition of involuntary unemployment. (Parenthetically I venture to assert that when Keynes described that book as 'a long struggle to escape' it was Economic Man from whom he was escaping.)

Furthermore, aggregative econometrics, regarded as a science of regular relationships between objective totals, would be quite unscathed. What would go would be any inferences from its results to the minds of individuals that made use of any axiom of rationality.

A new branch would appear devoted to the construction and maintenance of the models of individual behaviour that we need (and perhaps to models of collective behaviour, as for example in the case of trade unions or stockbrokers, if it were found that they could not be regarded as varieties of individuals). It would plainly have to be conducted in close concert with the psychologists who have not been consulted by the economists for a century now. (All honour to Professor Scitovsky for breaking the ice!) It is not a question of merely taking over results from them, since what are required are models for specialist use, covering only a section of the matters that interest psychologists.

There would be much pure theory to compose. Since we would be substantially deprived of the notion of equilibrium (outside the short term of the business sector) this, it would appear, would be largely concerned with temporal evolutions over short or long sequences of time-units, and with the conditions that limit the range of the possible. Once we throw away the determinism upon which the model of Economic Man is erected, Chaos (we have to believe) is not altogether come again. It is the corollary of the obvious impossibility of explaining the future that the explanation of the past should include the record of many surprises and of much reaction to them. Neither the surprises nor the reactions to them can be repeated in the same way, but, being what we are, we cannot refrain from thinking out what might happen if the differences were not too great, and superimposing this upon a recognition that in a world in which natural laws seem to last, human physique changes slowly, and the human mind is subject to habit, there is
only a limited range in which the future (or as much of it that concerns us) must lie. To realise that equilibrium growth models are bosh, because they are built out of impossible components, does not deny us the prospect of theorising about growth altogether.

There is this also to say about future theory. A standard response of those to whom one complains about Economic Man and the pure theory based upon him is to protest that theory (and its foundations) should not be taken too seriously. So long as the foundation is absurd, this is hard to deny. Ad hoc empiricism will be a better guide - if the data for it are there. But they are often not, and then (as already noticed) we have either to fall back on theory (and be doctrinaire) or proceed on uninstructed guess-work (socially acceptable only if it satisfies political prejudice). Theorising from well-based models is a different matter. Incorporating admitted ranges of uncertainty, no one would be tempted to suppose that it gave the answers without such empirical checking of the situation in question as was possible; but where the immediate facts were too few to be conclusive on their own the theoretical indications need not be dismissed. They would not be drawn out of thin air. A future body of economic theory might be of practical use.

VIII
Belief in Economic Man has long dominated Welfare Economics as this in turn has been the text for debates about public policy well outside the circle of professional economists. While it has long been agreed that, at all strictly stated, the postulates defining Economic Man do not in themselves suggest anything very precise about policy towards the larger social issues, add, to taste, very simple quasi-political postulates, and belief in Economic Man gets you to sweeping conclusions. Assume an equal and declining curve for everybody's marginal utility of income and egalitarian ideals are nearly demonstrable. Refuse to make inter-personal comparisons and assume public officials uncontrollable and always after their own maximum welfare regardless of anyone else's and you are on the verge of defining laissez-faire capitalism as the obvious ideal for all intelligent men. Again Economic Man is the methodological foundation for the flourishing pseudo-science of cost-benefit analysis, with 'revealed preference' as the
trick for infallibly quantifying the unquantifiable. Discard the old doll and almost all the arguments used by economists in their discussions of public policy evaporate. Normative economics is all to do again, and unnumbered suggestiones falsi are to be undone. The task is urgent. Whately, interrupting a clerical career to take the Drummond Chair at Oxford, prophesied correctly in 1831 that 'the world, as it always in fact has been governed by political-economists of some kind, must ultimately be under the guidance of such as have systematically applied themselves to the science' - and Chicago, with Economic Man inscribed upon its banners, is on the march.

In addition, a branch of normative economics that at present barely exists at all would be opened up if the old axioms were wiped out: that concerned with the normative aspects of private economic behaviour. What can be said about this by a believer in Economic Man can be said in a sentence scarcely worth pronouncing: men should (if possible) be better informed, discount the future less, and (maybe) be less self-regarding. But should the generalisations that men are usually stupid, lazy, imitative and unthinking in their economic activities become our starting point, there is much to analyse about the extent to which they might change their ways and the consequences to themselves and others of their doing so. Whether they should become textbook Economic Men, being impossible, need not be upon the agenda, but there are numerous less imaginary alternatives to explore.

IX

It may be noticed that the parts of economics that I have suggested would be ejected or belittled in the course of the reconstruction of our foundations include some that many economists regard as the central core, if not the Holy of Holies, of their subject. It may also have been noticed that some of the topics that are brought in belong also to sociology, to anthropology, to psychology and to many of the horde of hybrids between those that have been engendered in academic zoos in recent years. The suspicion may thus arise that what is proposed is either that economics be submerged in, taken over by, some other social science with aspirations to command the whole field of human affairs, or that it do this taking over itself. Accusation of plotting in the latter way might indeed be brought against Chicago,
whence Fifth Columns of devotees of Economic Man are infiltrating Law, Politics, Anthropology, Politics, International Relations and much else, but the present argument is innocent of either charge.

It is not to be doubted that social phenomena cover so wide a gamut and are so evidently complex that despite their equally obvious interdependence their students must carve them up in order to study them in any serious and careful way. It is no more to be questioned that the phenomena traditionally and, to my mind still properly, covered by economics - prices, outputs, incomes, etc. - are, like those covered by other social sciences, the outcomes of the thoughts, emotions and actions of individuals, reside in individuals, are studied by individuals, and that individuals must always know more of themselves (not much but more) than of such large vague, artificial macrocosms as Society, Economy, Class, State that they invent in search of grand generalisations. Hence, every social science must start out from a view of the tract of personal psychology involved in the phenomena it covers, and, the microcosm of the individual being as complex as these macrocosms, it must have as its starting point only a model. But it will get off on the wrong foot if, ignoring the existence of psychology as a separate discipline, it invents an amateur model for itself. The two subjects overlap. Furthermore, though every social science should have a boundary, a restraint on its pretensions, it is an historical, irremediable and (to the writer) an acceptable fact that they overlap among themselves. When this occurs the psychological models they use must at least be reconcilable with each other. The whole of this paper is an attack not on the boundaries of economics but upon the bad model it starts from, and it is coincidental that a large part of the complaints made about this model relate to the omission from it of factors such as habit, imitation, learning, etc. that are the stock in trade of the sociologists, anthropologists and others. This is not to deny that, were we to achieve, in collaboration with the psychologists, adequate models, and use them in civilised language, we would find that we would gradually surrender our present isolation, apartheid, and discover that we had much to learn from and much to teach the overlapping disciplines, in the areas of overlap.
One may say that to urge the destruction of Economic Man is to call for the violent subversion of the altar of the faith of economists, and according to one's prejudices, laud it as Progress or denounce it as Blasphemy. But I would prefer that the argument of this paper be judged as something much less dramatic: as an invitation to economists to return to the older tradition of discussion of real men's affairs in a real world. In a famous assessment of Ricardo, Schumpeter wrote:

Economic theory is ... to use Mrs. Joan Robinson's felicitous phrase, a box of analytic tools. And these tools are not a heap of disconnected elements but form an engine. The engine grinds out results, within wide limits, whatever the concrete problem is that is fed into it ... But, of course, if a defective engine meets with success, that advance may easily prove to be a detour. And let me state at once: a detour Ricardian analysis was.

What is being urged here is that Economic Man, the long episode in the history of economic theory that runs from Jevons to Samuelson and Friedman, has been another such detour, one that has led economics into very dry and fruitless wastes, and that we should heed those who protested so far vainly against the way we have been going on. We should follow up Keynes's gibe about Benthamism as an 'extraordinary contraption' and attempt to fulfill the intention quoted above which Marshall proclaimed in the preface to his Principles, almost ninety years ago.
It is a traditional function of economists to formulate and advocate what might be called politico-economic doctrines; lists, couched in general terms, of the kinds of interference the State should or should not make in the private economic affairs of its citizens. A doctrine, in this sense, is not a program but rather a framework within the various leaderships of the community frame their various programs in the lights of their more detailed interpretations of what their followers want and what they can provide or safely promise to provide. Though a doctrine is thus a very general affair, admitting of exceptions as must all generalities, it is pretentious for anyone to offer one for consideration, and economists in doing so make the claim to know as much as or more than other students of public affairs of the ways and aspirations of mankind in the ordinary business of life, and of the economic consequences of public policies, and they claim too some nous about straight politics. Nevertheless, if their work proves to have honoured these claims, if they have got their views on these high matters right, if they have resisted the temptation to tailor their proposals to their own professional or personal prejudices, if they refrain from preaching their own personal moralities, they can advocate, and in the past have advocated, doctrines that are effective and useful: effective in the sense that they are adopted by the leaders of the majority of the electorate and debar no kind of policy that this leadership has every intention of implementing, useful in the sense that no policy sanctioned is too difficult technically or too demanding morally to be safely permitted. Such doctrines, when achieved, contribute importantly to the preservation of politico-economic equilibrium. Given the conflicting interests of the public and the technical and moral capacities of the leaderships they have selected for themselves, the electorate gets the best flow of legislation and policy it can hope for. The politicians and administrators have
academic backing for the policies they are called on to implement, and if they get the details right these are successful. And finally, the economists have the comfortable feeling that they have set Government on the right rails...

Unhappily (or otherwise) everything flows. The economic aspirations of the public change; small minorities become large ones; the structure of the economy changes; accepted duties of government become too difficult to be performed; duties previously excluded become imperative. A doctrine effective and useful in one generation becomes otherwise two or three later. We drift out of politico-economic equilibrium and there is a new doctrine to seek. The argument of this essay is that, in affluent liberal economies at the present time, that is our present condition: we need a new, in fact a third, doctrine. Indeed it may be overdue.

Over the last century or so we have had two good doctrines. The laissez-faire of the classical economists helped to liberate the rising business classes from legal obstruction and to give them the legal framework for large-scale enterprise; it weakened the respectability of the special pleading of the agricultural protectionists; it helped to deflect the energies of the ruling classes into the necessary strengthening of the physical and educational infrastructure of a rapidly urbanising society - an activity in no way barred by the doctrine. But in due course it became obsolete. It offered no scope for much action to cope with the trade cycles of an industrialised economy and the inefficiencies of monopolies and imperfect competition, and, worse, it offered no outlet to those who were demanding action about income-distribution, a minority gradually becoming a majority, enfranchised and led. Laissez-faire came to appear to be - and, in fact to become - a sectional creed. The 'Old Welfare Economics' of Marshall and Pigou, when supplemented by the work of Keynes, met these deficiencies, and quickly established itself as a second doctrine. The creation of the welfare State was sanctioned by the introduction of three fundamental and commanding ideas: that there was a distinguishable psychological magnitude, the economic welfare of an individual; that this was related to his private real income, rising with it, but not so fast; and that this relationship, factors such as age and family responsibilities allowed for, could be taken, for purposes of practical politics, as the same for all. Furthermore, refinements of analysis demonstrated multitudes
of ways in which a free enterprise system might fail to achieve the production of maximum real income in the economy as a whole, above all in the matter of full employment, and gave a general sanction to remedial intervention by government. Once the leading ideas of this doctrine had spread through the leaderships of all the main parties and interest groups it proved splendidly effective and useful: the quarter century following World War II, during which it dominated the discussion and execution of economic policy, were years of unprecedented material progress and, for good or better measure, gross poverty and gross inequality vanished. Nevertheless it is obvious enough that in the lastest decade of our ever-faster flowing world something has gone awry, and in a manner that has left the economists (now the expert advisers par excellence of all the leaderships), the leaderships themselves, and the general public themselves all about equally puzzled, frustrated, disappointed and surprised.

My explanation and my remedy for much of the mess into which we have drifted - no sane man will try to explain and remedy all of it - can be summed up in the assertions that this second doctrine has become obsolete and that the time is ripe (if not over-ripe) for a third. Developing this, the preferred doctrine can first be stated in the baldest outline, by adding to and subtracting from the list of duties currently accepted. The three alterations can then be separately defended before the argument reaches some questions about the economic psychology of the general public on the answers to which above all else the acceptability or otherwise of this third doctrine depends.

II

The third list of duties for the state now suggested contains all those included in the first. These I take to have been the preservation of law and order, and the provision, whenever it was not to the interest of private citizens to do it, of the basic physical and educational infrastructure required by a free enterprise system still operating in conditions in which the majority of the population were scarcely above the minimum subsistence, with extremely bare arrangements for preventing death by cold and starvation for those unable to do this for themselves. To these I would add the two main duties that the analysis of the 'Old Welfare
Economics' and the work of Keynes added to the old list in the earlier years of the second doctrine: the replacement of the last-resort welfare services of laissez-faire with the full-scale social services of the Welfare State, assuring a level of modest comfort to the sick, unemployed and aged, and the active pursuit of full-employment by general measures. The great majority of the electorate now want all this, and it would be fully consistent with the notion of a doctrine that there should be much controversy about the precise level and the administrative procedures of its provision.

Then, however, three changes would be made which may be listed in ascending order of apparent heresy.

I would move up, and expect to become eventually (in terms of the energy given it by senior leadership) the supreme task of the State, and set of duties concerned with the preservation, improvement and adornment of the physical conditions in which we spend the public part of our lives. These duties are, of course, already recognised today but it is unquestionable that they take a very remote back seat with the two that came in the later phases of the second doctrine and which I would virtually excise. One is the duty to go on from the objective of full-employment to that of attempting to maximise the rate of growth of measured output by selective intervention anywhere in the private sector where maximum efficiency does not appear to be being attained. The other is the duty to go on from the provision of decent minimum standard of living to all who are for any reason unable to provide it for themselves to the attainment of an ideal distribution of income and capital among the entire population. Both these duties follow logically from the basic analysis of second doctrine and they have come to occupy the lion's share of the efforts of the State as, so to speak, second approximations to the ideal after the first approximations of full employment and the national minimum have at least in principle been achieved. To defend the proposal that we should give them up thus requires that the continued validity of that basic analysis should be controverted.

Naturally enough there are plenty of particular interest groups to which, individually, these modifications of the existing doctrine would, individually, much appeal. They are also advocated in one form or another in two recent books by academic economists that can be regarded as proposing
new general doctrine. The subtractions would be approved - though considered entirely insufficient - by Professors Rowley and Peacock whose Welfare Economics, A Liberal Restatement refurbishes laissez-faire in that curious mixture of algebra and Cherokee effected by contemporary American votaries of Bentham. The addition, or rather the promotion, of 'public goods' is in line with the argument of the lamented Professor Hirsch from whose splendid Social Limits to Growth, a book as wide and civilised as the other is narrow and pendentic, parts of my argument are gratefully borrowed. But both these books are openly pessimistic about the chances of their favoured proposals being at all generally accepted and I am seeking to argue that the package of duties for the State which results from their proposals should be generally accepted by the majority of the electorate. My objections to present doctrine and my disagreement with the pessimism of these books all stem from disagreement about the economic psychology of the general public assumed as the starting point of the arguments from which both the present doctrine and their amendments to it derive. It seems however convenient to move towards this fundamental issue via some preliminary discussion of the three changes proposed one by one.

III

It is preposterous that, so far as everything is concerned that happens to us outside our homes and places of work, this, the richest age in our histories, should also be the noisiest, shoddiest, possibly smelliest, least convenient, and certainly ugliest of all. To those with imagination about the possible, or merely of an age to have long memories, a large part of their lives is qualitatively revolting; many of those without memories of earlier times and without imagination about their surroundings whether or not they are aware of it are suffering pains that were avoidable and missing pleasures they could have enjoyed. It is natural that when the majority are intensely preoccupied with the urgent wants of poverty these environmental considerations should be neglected, or tackled only in so far as they are urgent in relation to the efficiency of private production. But when basic material needs are safely satisfied men have time and emotion to spare not only for the pleasures to be secured from more private real income but also for the pleasures and pains of their public lives. The management
of these for a multitude of familiar reasons is largely
the scope of free enterprise and calls for a mass of
interventions by the State, interventions not merely to
counter the squalors of large-scale manufacturing, the petrol
engine, the property developers and the worst generation of
architects the world has ever known, but actually to promote
the convenience and beauty of our environment as a positive
aim, as a mode of satisfying a want consciously felt or latent
in the majority.

The enormous boom in the tourist industry and the ever
greater crowds, of the formally unsophisticated as well as
of the elaborate educated who visit the so-far-unpolluted
stretches of beautiful countryside and the so-far-surviving
monuments of past ages is surely evidence of a large and
unnecessary deprivation. It is not obvious that it is more
costly to create and preserve beautiful and convenient cities
than it is to let them become hideous and congested messes
from which all flee the moment they can. How grotesque it is
that nostalgia for the past should be so nearly universal when
we think of this part of our lives, and that this should not
be the one in which it was a pleasing thing to be in public,
享受 communal delights that we can at least afford!

In these matters, had the State leapt at its
responsibilities and its opportunities twenty or thirty years
ago - and not been driven reluctantly to a mere minimum of
low-level activity by the harassment of minorities outside
the established leadership - the majority would by now have
become pleased with the results and interest in the
possibilities ahead. This would have had repercussions in
other fields of policy to which I shall come later.

IV

More argument is needed to defend the proposals to remove
economic growth and efficiency and the proper distribution
of income and capital from the reigning list or the duties
of the State - and from the top of it at that. Though the
objections to be made to them are very similar, the two
groups of policy can be considered in turn.

Once the leaderships of the post-war had become
reasonably assured that they could maintain full employment
by general fiscal and monetary measures (an achievement that
in itself made rapid growth in total outputs a certainty), they set themselves the yet more challenging objective of raising the rate of growth still further by selective interventions wherever the private sector fell short of full efficiency. Economic theorists could provide a lengthy list of occasions on which this might occur, even in conditions of full employment; government after the long years of wartime controls had few inhibitions about its intellectual and administrative capacities; and industry had in the same period become accustomed to take its troubles and its hopes to the sympathetic ears of the political leadership. The result has been an endless proliferation of would-be helpful interferences in the detailed affairs of individual firms and industries. They are to be helped because they are large and conspicuous; because they are not large and not conspicuous; because they are trying out new, advanced and untried techniques; because they are not, and should be; because they are expanding fast and would wish to be expanding faster; because they are not expanding; because they are declining; because they are in their right place and deserve compliment; because they are in the wrong and need help to move; because they are well managed; because they are ill managed; because their labour relations are chaotic; because they are not - the list is endless (even without mentioning the flock of interventions occasioned by the balance of overseas payments).

Three reasons may be suggested for now placing a doctrinal ban on this type of policy - for establishing a strong general presumption that the private sector should be left to get on with its own business:

1 Even if the skill and integrity of ministers and officials were as splendled as the most romantic of idealists could wish, the intellectual problems associated with interventions of this kind must forever defeat them. The abstract theory of these interventions deals, as is the way of theory, with simple cases infinitely removed from the huge tangle of a modern industrial society. It is almost totally inapplicable to reality. The attempt to apply it in practice comes up against the most appalling problems of finding the relevant facts. True uncertainty reigns, and we have to fall back on 'good judgment' rather than on calculation. This most mysterious of qualities may (or may not) be acquired by those who have a lifetime of experience in
an industry but it is not vouchsafed by any benign
disposition of Providence to officials and ministers.
The Anglo-French Concorde is only the most conspicuous
of a long series of shattering blunders that have been
made.

2 There are few Philosopher Kings among rulers and few
impeccable Brahmins among administrators, nor are
businessmen immune to the temptation of a fast buck.
Selective interventionism has proved profoundly
corrupting to those involved in its multitudinous
decisions. Politicians decide with party votes rather
than national efficiency in mind; civil servants
prefer power to perfection; industrialists spend their
time on propaganda rather than on management; and there
is far too much plausible patter going on for the voter
to have the remotest chance to make any valid assessment
of the latest promises from the gangs of wheelers and
dealers to which their leaders have been reduced.

These (in other words) are the reasons favoured by
Professors Peacock and Rowley. One need not much
sympathise with their conviction that the world is
composed of Economic Men, whose moral obliquity will
necessarily exhibit itself among those of them who enter
politics and the civil service in an exclusive
preoccupation with their own material interests under
a mask of serving the public interest. Nevertheless
the science-fiction horror story they relate as the
demonstrable outcome of the latest American economic
theory rings most depressingly true of other places
than Chicago also.

3 The morass of planning and plotting into which this
kind of policy drags them necessarily deflects the
attention of leaders and administrators alike from their
other duties. Hence even if it were successful (which
it patently is not) it would still be necessary for the
proponents of doctrines to consider whether the cost to
the effectiveness of other policies of this kind of
policy made it worth pursuing, not so much in their own
view but in that to which the general public would come
if they had the opportunity to consider the matter. My
third reason for deleting selective interventionism
from the list of the duties of government is my
conviction that the public do not (or might quite soon
not) want the additional real income that this policy purports to provide at any significant cost to the effectiveness of other policies. To this proposition I will return later.

Take next policies designed to secure some ideal distribution of income and capital between persons. The institutions of the Welfare State necessarily involve what, by the standards of earlier times of peace, must be extremely heavy taxation, inevitably progressive when grants are reckoned in as negative taxation. There is also much empirical evidence that in advanced industrial economies the distribution of income becomes less unequal than in the past in the ordinary processes of economic growth. But, so long as the concepts of economic welfare and of its normal relationship with income are accepted by the leaderships it is entirely logical that they should seek to achieve the particular distribution they consider the best and that the instruments chosen should be progressive taxation right up the scale, both on income and capital. But again there are three objections:

1 Once they get down to the details the legislators and administrators land themselves (and their victims) in prodigious complications. The difficulty is not that, inter-personal comparisons being matters of informed judgment rather than of science, opinions will always differ about what is comparatively just; such differences are the stuff of all our daily lives. It is rather that everybody's opinion will admit a vast number of qualifications to any simple rule - income and capital are not simple concepts, and their owners differ in family responsibilities, in costs of earning income, in personal needs, etc., etc. The legislation becomes hugely complicated and troublesome both to the administrator and the taxpayer.

2 It becomes deeply corrupting to all concerned. A vast industry of tax-avoidance is created, evasion tempts many to whom honesty was hitherto easy and natural, special pleadings proliferate, everybody has his grievance, and every kind of self-righteous hatred of neighbours is provoked. A twinge of displeasure will perhaps always attend paying the price for even the most agreeable goods and services but a progressive tax-system is uniquely designed to make us paranoid
about paying for the services of the State: an indirect and proportional tax-system offset by simple grants to the unfortunate sick and old could be virtually invisible to the vast majority of the population.

I believe that, were they not misled by the agitations of their leaders and were they not so ill-provided with public goods, the majority of the public would not feel strongly about the distribution of income and would not demand or tolerate the taxation system needed to manipulate it.

Thus with regard to both the policy of promoting growth (beyond the pace at which, with full employment, it will proceed through market forces) and that of redistributing income (beyond the redistribution entailed by the provision of a decent national minimum) there are three simple objections: they are inefficient, corrupting and (at least potentially) unwanted by the majority of the public in whose supposed interests they have been instituted. In neither case would, as I see it, the first two arguments be sufficient in themselves: if the majority really longed for maximum growth and rapid redistribution they would rationally put up with a lot of mess and muddle in getting it - and if, so far, they were scarcely getting it they would always be open to promises that with yet more mess and muddle they would get it next time. The clinching argument is the third.

The view that the majority are at least potentially ready to become largely uninterested in increasing their own private real incomes or reducing those of others with more than themselves flies so flatly in the face of the convictions of nearly all our leaders and all their economic advisers that it needs elaboration and defence. To this most of the remainder of this paper will be devoted. It is the nub of the whole matter.

The question at issue is one of economic psychology, of the conscious attitudes and motivation of the majority of the general public towards increases in their own real incomes and towards the real incomes of other people. It is principally a descriptive question about what these attitudes actually are in wealthy democratic societies equipped with
the services of the welfare state but it has some hypothetical trimmings about the circumstances in which these attitudes might change.

Plainly there is no universal uniformity about these attitudes but before coming to a possible classification of main types there are some generalisations about the ways in which we think about our economic affairs - or rather do not - that seem to me relevant and reasonably safe. None of us does or could reach his view on the importance of more real income for himself and his family (or on any other economic issue involving aggregates and substantial periods of time) in an ideally rational and well-informed way. He will not know at all precisely what he means by real income, where to draw the line between public and private or the line between economic and non-economic. Nor, whatever definitions he may have implicitly in mind for these 'objective' magnitudes, will he be able to correlate them with any precise image of the streams of consciousness which they provoke in him. Nor can he forecast what these streams will be with income levels at all significantly different from those of the recent past with any confidence: he may guess the initial jolt well enough, but how he will thereafter accommodate himself will be obscure to him.

Still less, naturally, will he have accurate ideas of the economic experience of other people at income levels at all far from his own.

This string of platitudes can be summed up in the assertion that in wealthy societies we are inevitably stupid in our economic lives: they are too complex, the range of options open is too vast, for us to be otherwise. No doubt we may judge that we are leading very pleasant lives, but most of us acknowledge missed opportunities and even when we do, not only the most fatuous self-satisfaction will assure us that we have led the best we could have done in the circumstances.

This all makes for a wide variety of attitudes to increase in personal real income and to the activities we undertake in the field of politics (and the sectional quasi-politics of trade unions, professional association, etc.) towards satisfying whatever aims we have. But perhaps five
categories can be distinguished which between them cover the majority of the general public, granted some overlapping:

1 There are those who scarcely make any independent effort to formulate a personal view of the matter, but who pick up a general attitude from the articulate leaders of their social or economic group. They currently follow their leaders in behaving as if they thought increases in private real income the most important of all political objectives. For brevity, let us call them Sheep.

2 There are those who know (or think they know) exactly what they would do with more real income and long to do it. They think it entirely proper that their leaders should supplement their own efforts to raise their incomes, whether by the promotion of general economic growth or by transfers, and will put up with a great deal of social commotion to get what they want. For brevity again, and as a reminder of what a crowded zoo it is that we live in, let us call these Pigs.

3 Then there are those who also want more real income but for a more special purpose than Pigs: they want it the better to be able to hide away from the public discomforts of an industrialised age with insufficient public goods and insufficient regulation of 'adverse externalities'. They want a country cottage in a fine landscape, or a spacious suburban garden, or a house so attractive that they can hole up in it with an art collection so pleasant that they are compensated for the lack of beauty outside. Call them, since they hide so much, Owls.

4 Others will want more real income, not for the private pleasures sought by Pigs and Owls, but to show off, to be admired by lesser breeds, to take others who have been showing off in the past down a peg, or merely to prevent others preserving a relative gain they have recently achieved. They have status to enhance and maintain, and, this being very much a group thing, they expect their leaders to be active in the matter. Peacocks.

5 Lastly there are those who are content with their existing incomes and what is happening to them in the ordinary processes of growth and their own career prospects.
They have all the food, drink, clothing and warmth they need, and no fear of losing them. They have enough old and pleasing comforts to carry on with old habits (if they are that sort of person) or enough money with which to explore the variety of pleasures as yet new to them that exists in wealthy societies (if they are more adventurous). They have no strong emotions about their neighbours’ incomes, not envying those with more or imputing misery to those with less. They get on with their own lives with their families, friends and colleagues, and do not want their leaders to fuss about real income, either in its total or its distribution. They are, if you will, Tabbies.

I list these as principal types among the general public and intend no moral judgments upon them. The question is simply one of what the present distribution of them is, and what is happening to it. Our present leaders (of every party and every industrial group) talk incessantly and act strenuously on the implicit assumption that the vast majority of their constituents are Pigs or Peacocks or some muddled hybrid of the two; and the Sheep go along with this assertion of their wishes, dutifully baaing when the Pigs squeal and the Peacocks screech. But in this I believe them mistaken and the Sheep misled. As I see it, there is already a sizable minority of Tabbies, in every income group, and even more Owls, who (though they may not realise it) long for larger private incomes as a substitute for the public real income they are largely denied — and who would be Tabbies if they had the chance. My third doctrine of political economy requires that the majority of the electorate be Tabbies and that the leaderships of all parties aiming at (or sustaining) present power recognise that fact. It does not strike me as an implausible requirement.

Consider the matter dynamically. In the days before the Welfare State and the tremendous growth of the last thirty years it was entirely natural that the vast majority of the population should have been eager for more private real income, envious of those who had it in plenty, and that those with a sufficiency should have been keen to retain it and fearful of slipping back when there seemed no early chance of getting ahead. It had been, for many generations a world of Pigs and Peacocks and had acquired a set of leaderships appropriate to its electorate. But with growth, with the Welfare State, and with the greater economic equality
that has come with them, the prompting of personal experience must change for nearly everyone. The previously small class of Tabbies must grow as more and more people are free from economic anxiety (at every income level). But many potential Tabbies faced with the deterioration of the quality of urban life (and the parallel decay of the countryside and the overcrowding of pleasant holiday resorts) will turn from Pigs to Owls, a category I owe, as any reader of the Social Limits to Growth will recognise, to Professor Hirsch. Other Pigs, free of urgent material needs of a personal kind, will turn their greed and anxiety to matters of status, becoming Peacocks obsessed with the relative beauty of their own and others' plumage, and their neighbours' infuriating failure to give their own its due. Even more of those freed from an almost animal necessity to be Pigs, but realising how much of their gains are due to the activities of their leaders in recent decades, will become Sheep, quite ready, out of old loyalty (and thoughtlessness) to go on behaving in their public affairs as if they were still Pigs or Peacocks if their leaders so bid them. (It is virtually implied in the view here taken that in our private economic affairs we are less than rational and fully informed and that habit and imitation play a great part in them that, in the much more difficult area of public affairs we should be equally far or farther from truly independent thought when not urgently driven to it.)

Nothing in this denies the persistence in the contemporary electorate of many genuine Pigs, sincerely and possibly not at all mistakenly convinced that for them higher private real income is the prime necessity for happiness, and of many devout Peacocks, miserable unless they are properly admired and envied themselves and unless they can get some sharp pecks into the pretensions of their fellows. But I suggest that they are becoming a minority, and that, if the Sheep were not so misled and the Owls so neglected, we would by now have, or be well on the way to having, a majority of Tabbies.

This, of course, is equivalent to saying that our leaders are mistaken about the actual and potential wishes of the bulk of the electorate and that the politico-economic disequilibrium into which we have lapsed arises from this fundamental error rather than from any culpable inefficiency in pursuing the desperately difficult tasks which they believe them to have been set by their constituents. Since it is
evidently in their interest to have an accurate knowledge of the true aspirations of their employers my argument is incomplete unless good reasons can be found for their having failed.

VI

When it comes to assessing the range of basic attitudes in the general public the leaderships have two principal sources of information: their own observations and what they pick up from the writings of supposedly professional experts (or the popularisers of these writings when they become unreadable to plain men).

If what I have asserted about popular attitudes be true, it is not surprising that its truth has not been noticed yet by them out of their own observations. Those at the top of any leadership are inevitably elderly men and exceedingly busy ones at that. They acquired most of their views about their clienteles many years ago - at a time when, it has been conceded, the increase of private real income was indeed the urgent preoccupation of nearly everyone. Moreover the policies they have been pursuing have caused their lives to be led in a thick and smelly cloud of vested interests, professionally practised in the art of lying about their own representative importance. And when they 'meet the people' they are only too likely to encounter Sheep.

The ultimate responsibility lies here upon the economists, the supposedly expert and impartial students of 'man kind in the ordinary business of life', whose work for nearly two centuries has provided the body of concepts, reasoning and cool observation from which the leaderships of all kind have drawn their formulations of the truths and aspirations of mankind in economic affairs. It has sadly to be noted that, over the last thirty or forty years the most reputed and influential schools of economists have - just at the time when their influence was at its greatest - failed in their responsibilities with respect to the matters here being discussed, the economic psychology of the contemporary public.

The story, which is to my mind both sad and rather discreditable, can be summarised quite shortly.
Almost from the days of Adam Smith economists have based their theorising upon a particular view of that part of human nature which gets involved in economic affairs, and have argued from a set of assumptions about the way men felt and thought about goods and services to the way they acted about them. 'Economic Man' is selfish, rational and calculating, and (usually) well-informed, his expectations about the outcomes of his acts being usually satisfied. They applied this 'model' first to his market transaction, conducted in money, and later extended it to his consumption and savings behaviour, elaborating a calculus in terms of utility for his whole conscious experience in economic affairs. As a (deliberately) simplified account of economic psychology, enabling the economist to move from individuals to whole markets and whole economies, this model was superbly successful - for the simple reason that it was, for the simple and austere conditions to which it was applied, a passably accurate description. It provided, among other things, a convincing rationale for the first approximation of the Welfare State. But it gradually lost its standing as a good simplified description of the essentials of economic psychology as the economy became rich, complex and riddled with uncertainty and rapid change. Keynes's analysis of unemployment required removing the assumption of rational and well informed decision-making from the whole field of investment and Union wage bargaining (and practical men instantly recognised the validity of his amendments). What should next have been discarded should have been notions that, for standards of living well away from penury, men could act in a rational and well-informed way in matters either of consumption and saving, and even that 'economic' could be distinguished from 'non-economic' experience. By the 1930s the time was becoming ripe - or over-ripe - for a new look at the traditional psychological assumptions.

Unfortunately this was a period when the natural sciences had supreme academic prestige and all the human sciences were suffering from one of their fits of wanting a share of their snob appeal. So it became the fashion to say that economics too should become quantitative, mathematical, objective and must henceforth abjure the qualitative, literary, subjective (and human) characteristics of its British origins. In fact psychology was to be extruded from it. This would have been all very well - perhaps if the new generation of Scientific Economists had really tried to go through with this self-denying ordinance and had
succeeded. Perhaps the psychologists would have returned from rats and sex to start afresh on economic life; perhaps the sociologists, who should have been tiring of Class and Status (which were becoming quite as unreal as Utility Maximisation), would have taken up the newly abandoned duties of the economists....But they did not go through with it. If only as a preliminary hint towards the hypotheses they were hereafter to test they needed some notion of the conscious mind, and so, having it both ways, they retained, as a methodological axiom now and not a generalisation from observation, the postulate that every economic act was the preferred alternative. Rational calculation being the central characteristic of Economic Man this was equivalent to now adopting the obsolescent model as an unquestionable truth. Henceforth they became uninhibited in arguing from observed act to the thoughts, emotions and tastes men must have had in order so to act, reversing the old method of analysis. Nobody noticed the reversal, and the old vision of economic behaviour now worn paper-thin was insensibly converted into a through-the-looking-glass science-fiction psychology unsupported by any psychological observation whatever. They deceived themselves and their readers and became the votaries of what had now become a myth, a myth that over the decades in which their public standing has been at its highest they have interminably propagated as the fundamental truth about economic affairs.

Because of this dismal lapse in the human perception of the academic students of 'mankind in the ordinary business of mankind' it does not surprise (or much alarm) me that the remarks made in the last section about the attitudes of the general public should be in contradiction to the firmly held beliefs of our leaderships and will appear merely eccentric to most economists - it is entirely possible that, variously blinkered, brainwashed, conservative and inattentive as they are, they should have been slow to see what (I guess) has been happening in a period of rapid change. My guesses - and one elderly man's judgments on matters of this sweep and complexity can be no more - may or may not be true but their protests cause me no special qualms.

The distortion of their professional view of human nature need not, of course, and sometimes does not prevent economists observing as plain citizens and men of good will that much has gone wrong with contemporary economic politics and policy - even the Sheep are baaing with an uncertain note
these days. But it is not easy for them to explain what has gone wrong (as they see it) in a manner readily consistent with their professional convictions that the population is wholly composed of Highly Intelligent Pigs and still harder to suggest remedial action with much hope of success. But it can be tried. With full liberty to impute unverified ignorance and unverified surrender to deceptions (alleged without verification to be made by other clever Pigs) almost anything can be reconciled with the postulate of universal rationality by the really earnest devotee of 'revealed preference': there are no holds barred in science fiction. The point can be illustrated from the two books mentioned.

Professors Peacock and Rowley argue that the very clever Pigs who run politics and administration could not possibly be clever enough to administer all the selective interventions required to achieve Pareto optimality - in which they are doubtless quite right - but are clever enough successfully to persuade their Pig electorate that they are trying and to conceal from them the fact their true motives are the swinish aims of personal power and promotion. But they see no remedy to this other than a moral reform in the electorate: they must come to value the 'negative freedom' - from legislation - higher than their desire to get more material goods by means of legislation. So much for selective interventions. But sufficient up-grading of 'negative freedom' will also push the 'positive freedom' into the background and this would also happily prevent those who want more real income (which seems to measure positive freedom) from using the State to get it for them via transfers. So much for social justice.

Professor Hirsch is altogether more realistic. He laments the inevitable frustration of the Owls and the Peacocks (who are after all only Pigs who respectively include scarce and unreproducible works of nature and art and equally inevitably scarce social standings in their economic objectives). He also laments the extension of rational and maximising and selfish behaviour outside the traditional bounds of economic activity. But he too sees no hope without moral reform: in his case an increase in (or recrudescence of) old-fashioned brotherly love. This would allow the rare beauties to be moved into the public sector, satisfying the Owls. It would also produce such an improvement in the manners of the successful Peacocks that the rest would be able to put up with their fate more easily.
That writers whose instincts are evidently pointing them in the direction of the third doctrine I am urging should, after writing it up in professional language, find themselves leaving economics for the pulpit, gloomily uncertain of achieving their ends, confirms my sad conviction that the present state of Economics is the principal obstacle to the acceptance of that doctrine. It is their belief that the general public is composed of Economic Men, either straight Pigs or Owls and Peacocks, all very clever about their aims, that is the trouble. This precludes them from acknowledging the emergence of the Tabbies, harbingers of the state of economic bliss (whose way of life was discussed in Keynes's now fifty-year-old essay on 'Economics for Our Grandchildren'). It stops them thinking that the whole horde of Sheep could exist, following out-of-date leaders - and even that the leadership could be much out of date. Indeed it virtually prevents them from believing that leadership, as something more than executive agents of fully explicit public wants, can exist at all. The economists of the thirties who surrendered to behaviourism in the name of science and ended up as Benthamites of the crudest kind have I think much to answer for. In the last analysis the present disequilibrium is their work. It is not much use their preaching at the rest of the world, but I cannot resist preaching at them.
THOUGHTS ABOUT THE BENTHAMITE WORM

I

In the two years following the publication of the General Theory Keynes's miscellaneous writings contain a little crescendo of remarks about the Benthamite tradition that has come to fascinate me.

It starts, piano, with his article in the Quarterly Journal of Economics, written late in 1936 and published in the issue of February 1937. After referring to the many kinds of economic decision that are taken in circumstances of true uncertainty, he goes on:

About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know. Nevertheless, the necessity for action and decision compels us as practical men to do our best to overlook this awkward fact than to behave exactly as we should if we had behind us a good Benthamite calculation of a series of prospective advantages and disadvantages, each multiplied by its appropriate probability, waiting to be summed.

Next, delivered in February 1937, and published in April is his Galton Lecture on 'Some Economic Consequences of a Declining Population'. In the opening paragraph, forte, he refers to this mode of calculation as 'an extraordinary contraption of the Benthamite School' and adds:

In this way a mythical system of probable knowledge was employed to reduce the future to the same calculable status as the present. No one has ever acted on this theory. But even to-day I believe that our thought is sometimes influenced by some such pseudo-rationalistic notions.
Finally, fortissimo, there is a climactic passage written in September 1938 as part of the paper on 'My Early Beliefs' read to the little Memoir Club containing his oldest and most intimate friends, but not published until after his death. Since it was printed at his own testamentary direction, one of only two papers so published, it can fairly be taken as something to which he attached a very serious importance. Speaking of the early days of his friends and himself he says:

We were living in the specious present, nor had begun to play the game of consequences.... This brought us one great advantage.... we were among the first of our generation, perhaps alone among our generation, to escape from the Benthamite tradition

and a moment later he goes on, in a passage I will quote in full:

It can be no part of this memoir for me to try to explain why it was such a big advantage for us to have escaped from the Benthamite tradition. But I do now regard that as the worm which has been gnawing at the insides of modern civilisation and is responsible for its present moral decay. We used to regard the Christians as the enemy, because they appeared as the representatives of tradition, convention and hocus-pocus. In truth it was the Benthamite calculus, based on an over-valuation of the economic criterion, which was destroying the quality of the popular Ideal.

Moreover, it was this escape from Bentham, joined with the unsurpassable individualism of our philosophy, which has served to protect the whole lot of us from the final reductio ad absurdum of Benthamism known as Marxism. We have completely failed, indeed, to provide a substitute for these economic bogus-faiths capable of protecting or satisfying our successors. But we ourselves have remained - am I not right in saying all of us? - altogether immune from the virus, as safe in the citadel of our ultimate faith as the Pope of Rome in his.

So far as I know Keynes did not return to this theme: September 1938 was after all the month of Munich and for the
remainder of his life he was wrestling with much more immediate threats to civilisation than the slow cancer of Benthamism. Nevertheless I suspect that in these passages we get to the heart of the critique of contemporary social and economic affairs to which he was arriving in his full maturity, and in what follows I shall argue the proposition that in 1978 the Benthamite worm is still (and more than ever) the fundamental source of most of our present discontents and threatening worse. I shall do it in my own words in terms of my own interpretation of the nature and habitat of the worm. I abjure the pretence of knowing exactly what Keynes meant in 1938 and the absurdity of guessing what he would have thought forty years later. Nor do I wish to imply that Bentham himself would have been a Benthamite a century and a half after his death.

II

By the Benthamite tradition I mean a cluster of somewhat ill-defined beliefs about human nature as it exhibits itself in social economic and political affairs which are held explicitly or implicitly by the majority of our leaders and rulers. By leaders and rulers I mean the amorphous class which contains the main political leaderships and their active followers, the administrators who interpret their behests and all the journalists and publicists who feed all concerned with their language and illustrate their attitudes. None of these people are original thinkers, and no doubt their notions derive ultimately from academics (as Keynes suggested in the peroration to the General Theory) but I am not concerned here with origins and blame, and for the sake of peace and quiet will accept without question in particular the assurances I would certainly receive from contemporary academic economists that their own rampant, Benthamism is faultlessly free of any substantial content whatever.

The central core of the tradition is belief in the 'extraordinary contraption' seen as the presumptions that men are rational maximising characters, normally well-informed - forecasting correctly - but, when lacking the information required for probabilistic calculations, capable of finding it with expert assistance. To that I would add two subsidiary beliefs: that men are largely uniform and that they are greedy for material things for themselves.
Both, besides having their obvious plausibility, powerfully support the plausibility of the central belief: if we were not uniform we would find it altogether more unlikely that we could each assemble the information required for correct calculation, and if we did not spend most of our time on economic activities we would be spending it on activities altogether less plausibly to be supposed subject to the utilitarian calculus.

III

Not, of course in strict logic, but certainly by the loose kind of inference by which men in fact live, these three presumptions lead to two very general conclusions which have become the accepted premises of nearly all our rulers in their political activities.

The first is that men's happiness in a large part of their lives, the part of political relevance, is primarily related to their private real incomes, net of tax. This follows from their combination of greed and rationality.

The second, following on from this and our uniformity, is that, subject to various fussy qualifications, were we all devoted to the maximisation of the happiness of the whole community, we would require of our legislators that they ensured a far more equal distribution of income and wealth than we have.

For two millennia now Christians have wrestled with the consequences of having a God-ordained requirement to love their neighbours as themselves and simultaneously, a fallen human nature which has a firm resolve to do nothing of the kind, and maybe it is not altogether unjust to assert that they have coped with this by 'tradition, convention and hocus-pocus'. The same tension, however, reappears in the 'bogus-faith' of Benthamism and in a more acute form. There is no hope that the next world will redress the imbalances of this and no humble acceptance of the queer things permitted by the Almighty here below. The deal has to be achieved in this world, and to all good Benthamites it is the function of the State, by commission or omission, to achieve it - so far as human frailty permits.
The dilemma is far less painful for the Left than for the Right. Progressive taxation and cash transfers to the poor have the delightful merit of both satisfying the material greed of the lower paid and serving to maximise the aggregate welfare of the community: self-interest and moral egalitarianism point in the same direction and they can pose as wholly virtuous. Moreover the many theoretical ways in which a free enterprise system falls short of perfect efficiency - monopoly, imperfect competition, etc. can be remedied by hosts of interventions by the well-informed State, or (more neatly yet) by socialisation. The only real difficulty of principle is the selfishness of officials and ministers - but leaders rarely find it hard to present themselves as persons of quite exceptional public spirit, and until long in power usually get away with it.

Things are much harder for Benthamites on the political Right, representatives of higher income groups. They can only justify inequalities of income on the grounds of incentives, a social necessity for keeping such exceptionally hard working persons as themselves, performing such exceptionally painful, difficult and productive work as is theirs, strenuously at it for the benefit of all. To the lower-paid majority these wails may not seem obviously plausible, and they certainly have about them a displeasing air of conceit and arrogance, when they are not blatantly special pleading. Nevertheless 'Growth' is an attractive slogan to which even the Left cannot object in general: just as 'Social Justice' cannot be wholly discounted by the Right. It is not surprising that it should become common ground between leaderships in the Benthamite tradition that the supreme problem of political economy is to find the right balance between the two Grand Objectives - or that Right and Left chiefly disagree about where the balance currently lies.

IV

After thirty years in which the Benthamite tradition has been in full and uninterrupted control of our affairs we find ourselves in an economic depression with inflation and high unemployment, few signs of any end to them, and (more important still) a very general conviction that our new-found material affluence has been a great disappointment to those who should be enjoying it. Why?
In considering the causes of inflation and industrial depression it is not to belittle the enormous shock of the sudden quadrupling of oil prices to believe it the occasion rather than the independent cause of the events of the last few years. The power, absolute and relative, of the lower income groups, both in the industrial and the political arenas, has been steadily increasing with the tremendous economic growth of the post-war years. We were due in any case to have a strong upward pressure on money incomes and a political impossibility to do anything much about it by monetary and fiscal policies until things were in a mess. We were due in any case to have strong union obstruction to much technical and structural change in industry and in the political field (given the Benthamism of our rulers) a taxation system of ever-increasing and intolerable complexity and an ever-increasing tangle of government interventions all over the once-properly named 'private' sector. A consequential collapse of the 'animal spirits' of the entrepreneurial class was due - and it is only the resurgent Benthamism of the economic profession that has prevented them seeing this eminently obvious (and Keynesian) phenomenon, and equally denied its recognition by the leaders they advise so incessantly and loquaciously.

Except for the conspiratorial devotees of the Marxist reductio ad absurdum - gleefully promoting present evils that eventually good might come of them - none of our leaders have intended these things. They have merely been pursuing the end they have set themselves - the maintenance and increase of the private real incomes of their various clients as efficiently as they think they know how behind a rather transparent veil of devotion to the public good. That their means have proved unsuccessful is all too evident. My thesis is that their ends have been equally mistaken. The Benthamite tradition is obsolescent, if not obsolete. Our leaders have misconceived the ends their followers and subjects would wish them to seek.

V

So long as the vast majority of the population are in or near conditions of gross material want, with their simplest physical need incompletely satisfied, and living in a society with a simple economic organisation, the Benthamite version of human nature had much to be said for it. In such
communities material needs predominate and they are largely uniform and there is no doubt what they are. Within the limits of their technical knowledge men are under a compulsion to be careful and calculating, and so soon as they have a little education they will be alert to adopt economic novelties once they have been tried out by the adventurous. Moreover, when they have the time and resources to enquire into the establishment activities of the State and discover that it is a tangle of feudal relics thickly encrusted with parasites they will demand that it be so reconstructed that it serves - and only serves - the material interests of the general public, or such of them as such observers could trust to behave as intelligently as themselves. Benthamism was a natural and, surely, desirable and effective view of public affairs at the time of its emergence.

What our leaders have not noticed is that the Benthamite view of human nature - whether as a near-description of the actual or as an attainable ideal - has become an impossibility as either in a rich and complex advanced economy. Even with respect to the present (that most mysteriously undefined short period) we cannot proceed to a rational maximising way selecting the probably best of available streams of consciousness. There are far too many and too complicated patterns of choice before us, and the links between acts of purchase and sale and the conscious experience to which they give rise are altogether too elaborate and spread over too much future time for us to work out. And as for the calculability of the future it should by now be unnecessary to add to what Keynes wrote (belatedly after a long struggle to escape the Benthamite tradition) over forty years ago.

Once we discard the central postulate of rationality the rest of the conclusions of the traditional evaporate. They no longer apply to the people we are discussing - the citizens of advanced wealthy economies. We are no longer reasonably assumed similar in our tastes and potential. If we are observed all to be doing much the same it is because we are stupid and imitative - not because we have rationally explored all the available possibilities and have reached the same conclusions about our preferences. If we are seen to be materially greedy it is for the same inadequate reason. The inference that private real income measures our happiness and the inference that equality of incomes is the means to the maximisation of the community's happiness collapse in
'turn. The continued dominance of these obsolescent generalisations is what justifies us in thinking of the Benthamite tradition as a pseudo-scientific religion, an emotive muddle of convention, tradition and hocus-pocus. It is harmful in a variety of distinguishable ways.

VI

1 That it has landed us in inflation and depression I have already suggested.

2 The unspeakable complicated and inefficient tax-system and the incoherent mass of intervention in private industry which it has engendered, besides being main factors in causing depression are profoundly corrupting to those who suffer them. We almost gloat over tax-avoidance and think other people's evasions merely venial. Special pleading for government handouts, whether by rich firms or indigent individuals, is damaging to self-respect and self-reliance.

3 More important yet, the Benthamite tradition is divisive in a singularly sweeping way. No doubt in any society different social groups will find excuses to hate each other. But the presumption that private real income is a matter of supreme importance sets everyone below the average against everyone above it (whatever the level of that average) and provides a pseudo-scientific justification, almost a sanctification, for hate, envy and guilt and greed in public affairs. It certainly did not need Benthamism to divide rich from poor in the politics of the Victorian Age - though to Benthamism must be given the high credit of making it administrably possible to handle gross poverty - but it does need to maintain this hostility as the driving force of politics in an affluent society equipped with the machinery of the welfare state.

These are, as it were, the positive ills we owe to the persistence of the tradition. But there are three ways in which it does what might be seen as negative harm: distracting us from recognising or implicitly undervaluing the importance of problems that, with economic growth, are in fact becoming of ever greater significance.
4 When our basic material needs are assured without the necessity of long and repulsive toil we can begin to lead civilised lives, and to that a precondition is that we constantly exercise our imaginations about the unknown and the as-yet-unexperienced. But if our educators and our leaders do not urge us on - if they behave as if we have these qualities already and have rationally decided that all we want is more private real income with the least effort - we are quite lazy enough, quite sufficiently intellectually and morally inert to fall prey to fashion and the lures of advertisement and let the professional liars and cheats of well-financed Public Relations con us into a host of futile and delusive wants. Nor will any critic of commercialism fail to find himself accused of being a snob and an elitist by earnest Benthamites devoted to the latest and most absurd variant of the doctrine of rationality - the cult of 'revealed preference'. Benthamism discourages us from recognising that for most of us (but for one thing to be mentioned in a moment) it would be far more gratifying in the long run for us to learn to spend our private real incomes wisely (and to insist upon earning them in civilised conditions) than to seek their increase.

5 The one generally valid reason why anyone should at all urgently seek a higher private income is that it enables him to insulate himself from and sometimes wholly to escape the vile mess we have made (over the last decades of growth) of the physical conditions of our towns and much of our surviving countryside. But, as the lamented Professor Hirsch argued in his *Social Limits to Growth*, it is the nature of things that only a minority could ever succeed. It follows, surely, that the achievement of an agreeable way of life in an extravagantly urbanised rich society is essentially dependent upon an effective control of the 'externalities' of din, stench, and visual squalor that (with population increase) have almost overwhelmed us, and upon efforts to make our physical environment outside our homes actually pleasing. To our private consumption, once, in the days of indigence, in some sense a genuine measure of our welfare, we have to add (as of increasing relevance when urgent private wants are satisfied) the 'public real income' of the surrounding from which only a handful will ever be able to escape. That this 'income'
has been deteriorating in the most appalling fashion over recent years is self-evident to those who have lived long enough to remember (and they can now appreciate the truth of the similar laments they heard from their elders in turn). Its decay is, one may suspect, a principal reason why 'growth' has been so dismally disappointing to so many. Outside the established leaderships a host of little pressure groups have sprung up - more power to them! - but the leaderships themselves have been inhibited by their crude Benthamism, their nearly exclusive preoccupation with aggregate measures of marketed outputs and with conventionally measured real per capita incomes, from recognising the facts and setting about their duties in any active and willing spirit. One could not say, of course, that the sophisticated academic Benthamites, lawyers and economists, who advise them have not seen the importance of this range of problems - its mathematical theory is of delicious complication, and thus attracts their lengthy attention - but so long as they retain their faith that they can and should be dealt with by measurement and rational calculation they can only flutter round the edges of the practical problem. (In what way Keynes managed, during the war, to persuade the State into a serious patronage of the arts will not be seen until another volume of his Collected Writings emerges but I bet it will not contain a cost-benefit analysis.)

6 If the Benthamite tradition has thus inhibited us from the imaginative conduct of our private economic lives and inhibited the State from appreciating its aesthetic and cultural duties to any faintly adequate degree it has also - the last vice I list in this communication - distracted us from what might be called the constitutional question peculiar to rich modern societies. The tradition is thoroughly democratic - as much or more egalitarian with respect to political power as to economic. Not only do its followers (as Keynes said of himself and his friends in their youth) 'repudiate all versions of the doctrine of original sin, of there being insane and irrational springs of wickedness in most men', they also believe the electorate capable of understanding, and willing to make the effort of understanding, the issues facing government and voting intelligently upon them. This second belief is, after all, no more than an implication of the belief that men
are rational and calculating, though admittedly an extreme one. As applied to the public issues of a simple and poor (but educated and literate) economy it was perhaps as defensible as the belief that private affairs were so conducted, but it is absurd of our kind of economy, and absurdities mislead. We are tempted not to face and not consider how best to counter the consequences of some utterly obvious truths about the economic and other politics of wealthy societies:

It is impossible for the ordinary citizen to have any clear and informed understanding of the enormous range of duties of a modern state in a rapidly evolving world: and it would drive him mad to try.

In practice his politics is a set of sentimental loyalties to groups of which he finds himself a member or to which propagandists attract him.

By a process of natural selection leaderships are composed of those best able to whip up the membership and enthusiasm of their groups by the publicisation of sets of emotive slogans appealing to the greed, fear and discontent of their membership.

When in power such leaders will no longer have the time or inclination to acquire any deep understanding of their legislative and administrative duties. They will be able only to attend to urgent problems, and will be biased toward short-term remedies and short-term consequences, neglectful of emergent problems whose solutions entail long, awkward transitions and whose positive fruits lie far ahead.

The exploitation of the full potentialities of great national wealth, and the avoidance of the multiple evils of large-scale industrialism require immense qualities of wisdom, determination and imagination in government.

It is the final fault of Benthamism to belittle the difficulties of securing these qualities in our rulers, and implicitly to suggest that they are necessarily supplied by universal suffrage and uncontrolled free enterprise for power-seekers. We all realise that they are not but we study no remedy.
In June 1930 - a month even more menacing to civilised existence than that in which he had reviewed 'His Early Beliefs' - Keynes wrote what seems to have been his last paper as a private citizen, not a civil servant. Addressed to an American audience, it was about the relevance to the United States of his proposals about British war finance, but at its end he added a few sentences about the remoter future, our present. They are so much to the present point that a selection from them may be quoted:

Is it vain to suppose that a democracy can be wise and sensible? Must the poison of popular politics make impotent every free community? ...We have to escape the invalidism of the Left which has eaten up the wisdom and inner strength of many good causes. The old guard of the Right... must recognise... that the existing system is palpably disabled... Let them learn from the experiences of Great Britain and Europe that there has been a rottenness at the heart of our society...1

May one not guess that this invalidism and this rottenness are the work of the Benthamite worm?

1Collected Writings, Vol. XII, p.155
D.M. Bensusan-Butt joined the Australian National University in 1961 as a Professorial Fellow, after a long career in the British Treasury, unusual in that he found time for distinguished academic work, especially an important theoretical book, On Economic Growth. In Canberra he turned his mind chiefly to a critical examination of the assumptions economists make in their theoretical work. The main outcome was a second book, On Economic Man, published by the ANU Press in 1978. But he also contributed a large number of articles on aspects of the theory of growth and development, on taxation problems related to his membership of the Taxation Review (Asprey) Committee, and on a variety of other topics. It is a selection of these latter papers, written in his inimitable style, entertaining and civilised, most of them hitherto unpublished, that is presented in this volume.

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