

On Economic Man

D. M. Bensusan-Butt



On Economic Man is a speculative essay upon the adequacy of the traditional assumptions about economic behaviour that underlie the bulk of economic theory and much of the thinking of economists about basic policy issues: the assumptions that men are self-regarding, rational, and well-informed.

The author recognises that both in theory and in practice economists require a simplified 'model' of economic psychology, and that this cannot be realistic. But after suggesting, in Part I, the remarkable strength of this account in its deductive uses, he concludes, after surveying its psychological assumptions in detail in Part II, that it is a misleading myth—above all in respect of the accurate information and calculation assumed. Part III tentatively examines what might happen to the subject if better models were constructed after systematic empirical studies.

This stimulating and controversial book should be read by every economist. It will arouse both fury and applause.

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On Economic Man

By the same author

On Economic Growth. An Essay in Pure Theory, Oxford, Clarendon, 1960.

On Economic Man

An Essay on the Elements of Economic Theory

D. M. Bensusan-Butt

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To Trevor Swan

Preface

The general intentions and plan of this book being set out in the introductory chapter, this Preface is reserved to the prior apologies and thanks which any book calls for, and certainly this one.

An apology, first, of the impenitent sort, for writing an academic essay on economic theory in plain English, a language now virtually taboo in this kind of discourse. I adopt (and recommend) it for safety's sake. Economics concerns ordinary folk in the ordinary business of life, and the more esoteric and specialised the language in which we discuss their affairs the easier it is to talk pretentious nonsense, and the harder it becomes to realise that we are doing so. For brevity and precision in their discussion many economic topics doubtless require a jargon, but when, as here, they do not—or not much—caution dictates common words for common matters. This, moreover, is merely polite: our victims have an interest in what is going on and are rightly, in the last resort, our judges.

A second apology, this time penitent, is called for. This essay was constructed in solitary cogitations about conclusions to be drawn from the most ancient and conventional elements of economics, by one who had come late to academic life. More especially because I found myself having to wrestle with burgeoning doubts about precisely the elements that I had hitherto supposed unquestionably obvious, it took so long to reach the conclusions here recorded that I largely neglected the duty of attempting to catch up with and keep up with contemporary literature on the topics examined. (Several lifetimes would have been needed to perform this task systematically.) Much, accordingly, of what I say has doubtless been said before and I must express my regrets at my failure to provide the profusion of cross-references to and comments, critical and complimentary, on recent writing that are now usual in academic writing. (At least brevity is served by this failure.) To this confession one qualification

[Preface]

can be made. During 1976, while my manuscript was in search of a publisher, no less than four good, or more than good, books appeared, covering (in a fascinating variety of academic styles) much the same issues as those I tackle. After reading (and permitting myself only a few clarificatory amendments to my main text) I have added an Appendix about them. Should any reader who has got so far here now take off, via this Appendix, and never return, I shall, not without difficulty, refrain from complaint.

This book was meditated and written while I was a member of the Institute of Advanced Studies of the Australian National University. It is their practice to collect a staff to whom, in the most congenial surroundings, are accorded rights of long-continued and undisturbed contemplation. I am deeply grateful to them all, and in particular to Professor Sir John Crawford and Professor T. W. Swan whom I suspect of proposing the gamble of tempting me from other activities. I would be sad indeed if the outcome brought into question the generous practices of that delightful institution.

I owe equal thanks to my colleagues Professor H. W. Arndt and Dr R. M. Sundrum for reading a first draft of this essay, and saying about it as much as friendship could risk. A penultimate draft received the equally flattering, alarming, and laborious honours of comments from Professor T. W. Hutchison, Professor G. L. S. Shackle, Professor T. W. Swan (*magistri magistrorum*) and Professor J. D. B. Miller. Some only of their remarks was it within my power to absorb into the present text, responsibility for which must, as usual, be mine alone.

No less thanks must go to Mrs Erica Harriss and her colleagues for their prolonged and successful struggles with handwritten manuscripts that were sadly capable of defeating even their author. For the index I am indebted to Dr R. M. Sundrum.

D. M. B.-B.

March 1977

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For over a century now the foundation stone of economics, theoretical and applied, has been a generalised account of the behaviour of economic agents in which they are depicted as self-regarding, rational, and, with qualifications, well-informed in the calculated choices required by their rationality. No large simple statement of this kind about a subject so vast in the range of its interest and studied by such increasing multitudes can, of course, be exactly true. Economic Man, to give this construction its traditional name, has no necessary or central place in the new sub-science of aggregative econometrics, and in another new sub-science, managerial economics, other constructions have largely replaced him. Nevertheless in the main stream of economic discussion in the western tradition, this account of individual behaviour in one guise (or disguise) or another is quite central, and those economists who have attacked it, or sought to use other postulates, have customarily been considered by the majority to be eccentrics, or heretics, or even sociologists. There is perhaps a little, but not much, exaggeration in regarding Economic Man as the totem of economics and acceptance of the postulates defining him for the starting point of any economic analysis as the distinguishing mark of professionalism among students of the subject. This essay consists of an examination of the strengths and weaknesses of this model, and some tentative reflections upon the implications to economics of my conclusion that its weakness greatly outweighs its strength.

Three preconceptions underlie the whole of the argument and do much to determine its arrangement. It will be necessary to return to them later but it is as well to state them briefly at the outset.

1. Economics concerns so large, and so interconnected, an area of human life—of getting unity from the tightness of these interconnections—that its

students cannot get far with many of their tasks unless they have, to set them on their way and accompany their efforts, a satisfactory set of concepts and general ideas, a body of basic theory. An essential and central part of this tool-kit must be an account of that segment of individual human nature which is involved in the making and execution of economic decisions. Whatever else this includes—for example links between conscious thought and physiology—it must cover the conscious psychology of decision-making. Economic decisions are consciously taken and have conscious experience as their immediate or ultimate objective. Even when, as in much positive economics, we are interested only in explaining and predicting 'objective' acts, it is inconceivable that we can do so without reference to the conscious thought that went to them. And in normative economics, since the desirability of any economic situation turns essentially upon the states of mind of those whom it concerns, an economic psychology covering conscious experience is equally imperative. This is (to many) a somewhat old-fashioned view of the necessary scope of economics but it is unhesitatingly adopted here. (In a decadent age there is nothing to apologise for in being out of date.)

2. So various and so complex is the human mind that this account of economic psychology must be a 'model' in the sense that it is abstract as well as general. That is, for ease of handling, some aspects of actual conscious behaviour have to be omitted, preferably (it need scarcely be said) those of lesser importance than those included. A 'model' is a generalised account of a simplification of reality, not a generalisation of exact descriptions. Thus even when it can be used in a properly scientific manner—when in constructing an explanation its parameters are assigned from good independent evidence, and the resulting prediction compared with the facts—it is still necessary to consider whether the omitted factors can reasonably be supposed to account for any discrepancy before the model is pronounced a good one. (And even when hypothesis and outcome agree it is possible that errors in the evidence used have offset omitted factors factually present.) But in economics the pursuit of definitive truths is usually even more difficult than that. For lack of time, or data, exacerbated by the large scale of the issues he discusses, the economist can rarely proceed in accordance with the strict canons of scientific method. Rather than bow out of the discussions of social and private issues in which his usefulness lies (and, still, the main justification of his existence) he has to assume that his model is a good one for the new situation being examined, and that the values he assigns, by mere judgment and general knowledge, to its parameters are good values for this situation. Unless he is to degenerate into that pestiferous thing, a doctrinaire, he must make the modest intellectual standing of his conclusions clear to his audience and in particular make them aware—and remain aware himself—of the factors from which his argument abstracts. It is precisely because original sin will always prevent full

obedience to such counsels of perfection that it is so vital, in any social science, that the initial model should be a good one.

3. Economic situations, whether of individuals, enterprises, markets, industries or whole economies, are characteristically changing; private economic decisions, even when themselves referring only to events a moment or so ahead, are always interdependent with decisions made with long-term matters in mind; all public economic decisions take time, and, the most interesting of them, often decades for their fruits to ripen. At the very beginning of his *Principles* Marshall observed that 'time is the centre of the chief difficulties of almost every economic problem.'¹ The neglect of time in the formulation of a model of economic psychology and in deductions from it threaten to make both useless for practical purposes.

These considerations suggest that there are two kinds of test to which the merits of a basic theoretical model of economic behaviour can be subjected.

The first, which might be dubbed, for want of any less clumsy term, the inductive-subjective tests, examine (a) the extent to which in all its details the working of the model can be readily imagined, familiarly used and understood, and (b) the extent to which when thus grasped it falls short of the realities of individual psychology in the situations to which it is being applied. That it will almost always fall short may be taken for granted, since it is, to repeat, a model and not a full description, but different models will fall short by less or more in any particular situation.

The second tests are deductive-objective and concern the range and complexity of the economic events that a model will predict and the accuracy of these predictions. A model that can only be used successfully to explain or predict a single price or output at a single point of time and space is plainly inferior to one that will cover the whole structure of an economy over an extended period of time. It is obvious enough that the larger the mass of prices, outputs, incomes etc. that the deductions from the model covers the less, given the limitations of the capacity of the students, we can hope to follow up the subjective experience of the agents involved. Hence in applying these tests to any particular model we can proceed with some disregard of the others and vice versa. But a good model, so far as the frailty of the human intellect relative to the mass of economic experience and action will permit, must pass both kinds: apart from its abstractions it must be recognisably valid when examined as an account of normal economic psychology, and it must permit large and long predictions, which to the extent that they are false must, recognisably, be so because of these same abstractions, or because parameters have been mistakenly measured, or because observations are inaccurate.

In Part I Economic Man is confronted with tests of the second kind; in Part

¹ Alfred Marshall, *Principles of Economics*, 9th (Variorum) ed., London, Macmillan for the Royal Economic Society, p. vii.

II with the first. The general method adopted in these Parts is one that, to the writer at any rate, seems useful in probing long-established assumptions when, though we know them to contain simplifications, we have half forgotten what these are. We can try to push arguments using these assumptions to their utmost limits, regardless of the qualifications and abstractions (some maybe half-forgotten, some maybe never recognised) to which they are subject. If the results look quite sensible and realistic, perhaps the model is a good one, even better than we expected. If they are grotesque we can ask ourselves whether the absurdity lies in the exaggeration of the use or maybe in some unnoticed weakness in the model itself, relevant even when used in a much more modest and practical way.

Simplification though he may be Economic Man is quite a complicated little mechanism, and when used to explain the affairs of a whole economy has a singularly complicated job to do. In Part I he is inspected for his capacity to explain the long series of the main aggregative features of economies, the objective series of prices, incomes, outputs etc. in their main sectors, and (for good measure) he will be invited to explain politico-economic events also. This is indeed pushing him *à outrance*, and owing to the scale of events explained, the argument has to be conducted in terms of a miniature and ultra-simplified version of him. But the miniature histories that emerge seem to have clear resemblances with real history. Economic Man, apparently, points to something like a theory of history. That abstraction from changes over time in tastes and attitudes and knowledge which is made, usually very quietly, in short-term theorising is, it almost appears, by no means so important as we tend to think.

Throughout Part I we refrain from peering into the thought processes of the populations of active utility-maximisers who inhabit our miniature economies, concerning ourselves only with their actions in an almost behaviouristic fashion. It is the principal intention of Part II to do this: as the inductive-subjective tests require that it be done. But it seems convenient, and to be allowed in a speculative discussion, to approach this task in a roundabout way. The determinate miniature histories of Part I have in their nursery fashion adumbrated a vision of long stretches of economic evolution being (in principle at least) derived from fixed rules of individual behaviour. But it is evidently improbable that, whether or not men behave at all nearly like Economic Man in some societies today, they have always done so. It is more plausible to suppose (with some economists and all philosophers of history) that an evolution in the modes of economic decision-making—in the extent of rationality and of knowledge of relevant economic possibilities—has accompanied the evolution of output, incomes and prices. Hence (provided that we avert our eyes from the problem of obtaining the necessary evidence) we can envisage a grand theory of economic history which traces, besides the objective magnitudes, the changes in individual rules of economic behaviour from

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an early date and determines their succession. But to do this we have to provide a framework within which all possible (or at least all plausible) sets of rules will fit. To do this in the guise of a search for a plainly unattainable ideal of historical explanation will incidentally compel us to examine closely what it is that Economic Man abstracts from—hence to help towards a judgment of this model from the viewpoint of psychological plausibility—while preserving in mind that background of unending change, both in the acts and the minds of men, which no economist or other student of social affairs can safely neglect. Part II is planned on these lines. As we pursue them arguments will emerge for the conclusions that the strength of the conventional model of economic behaviour that Part I suggested was illusory, that he is in all likelihood too remote from psychological reality to be applicable in valid ways to economic problems, and, finally, that he should therefore be abandoned as the foundation of economic theory.

Part III, addressed to the problems of constructing an economics not based upon Economic Man, touches for the first time upon normative questions. It is prefaced by a chapter, inconveniently long for a short book but inconveniently short and selective as a summary of the history of theory, about the emergence and standing of the idea of Economic Man. If this model be, as here suggested, a mischievous and misleading myth, one has to consider how it came to occupy its present position in our subject.

Part I
The Strength of
Economic Man

2

A Miniature Economic Man

As noticed in the Introduction the purpose of the four chapters of this part is to present a case for the strength of the account of human behaviour embodied in the traditional concept of Economic Man. Such an account will be stronger the more events its use will explain or predict and the more complete it is, the fewer the extraneous matters that have to be introduced to make its use for this end possible and successful. Here the pretensions that can be made for it will be pushed to the uttermost extremes in both respects.

Economists, past and present, have varied greatly in their statements about the universality of Economic Man. Here the sweeping assumption (or hypothesis) is tried out that it has been universal for the last few thousand years, the longest period with which even the most ambitious economist would think of concerning himself.

Similarly economists have to various extents dissociated themselves from substantial assertions about the nature of the economic wants that men seek to satisfy by their decisions to spend and about the nature of the attitudes and abilities involved in their decisions about the kind of work they will do (and the resulting product). Here the even more sweeping hypothesis is used that these too are, in effect, also constant and universal, subject only to the influence of climate.

Thirdly it will be supposed that the same rational self-interested behaviour that is exhibited in the private economic market is exhibited also in political activities relevant to the satisfaction of economic wants. This implies that legislation affecting private economic activities and the economic activities of the state are brought into the category of facts that Economic Man explains and are removed from among the categories of environmental data.

If one goes as far as this, singularly vast possibilities of explanation arise. We have, on the one hand, as the facts available for use in explaining and

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predicting, a description of 'human nature' and data about actual resources and the laws governing the natural environment. Both of these are constant and universal. On the other hand we have the endlessly changing and diversified records of economic history, the collective consequences of this human nature in the natural environment in which mankind finds itself. In principle we should be able to get from the one to the other by a deductive process. It would be necessary to have a starting point where population and the economic outcome of previous history (capital etc.) are given, not requiring to be explained; it would be necessary also to have some rules of demographic behaviour since the evolution of population is so vast a feature of economic history (though these could be made very 'economic' in kind); it would be necessary to abstract from the consequences to economic events of 'non-economic' human activities (which, when the 'economic' is widened to include political and demographic events, seems not implausible); it would be necessary, lastly, to allow for the dated accidents of plagues, droughts, earthquakes, floods etc. which, sometimes, have lasting consequences. But, subject to these addenda and qualifications, one should, in principle, be able to deduce all economic and most political history as the logical consequence of a single entity, human nature, working out its destiny in its natural environments.

Part I of this essay is intended to explore this monstrous possibility a little further. Obviously the constant and universal rules of behaviour of Economic Man, even if they existed, would be extremely elaborate affairs, requiring volumes for their exposition: he has hundreds of wants, and thousands of ways of satisfying them. The descriptions of his natural environment and the production possibilities open to him would require many more folios. And the deductive process by which this was all converted into accounts of economic evolution would doubtless strain the most powerful of existing computers, and generate the most prodigious rolls of paper. But, ruling that out, there is something far short of it that we can attempt: preliminary exercises of a drastically simplified kind designed to be merely suggestive. We can set up a miniature version of Economic Man who retains his qualities of being selfish, calculating and well-informed but displays them in connection with a drastically simplified structure of wants and abilities, and we can make similarly drastic simplifications of the environment in which he operates. We can then derive miniature histories. If this miniature man strikes us as about as realistic as can be expected of a miniature, if the environment exhibits at least some main features of reality, and miniature histories seem to have some resemblance with real histories (as we think they were) we will have got somewhere. No more than that is attempted in this part.

Students of contemporary work on the pure theory of growth will recognise, if only just, that what follows is an exposition of growth models. But both the models and the exposition are so unconventional that some preliminary comments may be helpful.

1. There are models with three factors and four commodities (five when government activity is introduced as a quasi-commodity). They are thus more complex than most: to the writer who can secure no imaginative grip on one or two sector models this is the minimum degree of complexity at which results are obtained that bear some plausibility as human histories.

2. Because of this complexity (as well as my total lack of mathematical skills), they are expounded in prose and in a narrative style, and are argued with what, by the standards of present-day pure theory, must be admitted to be a gross lack of rigour. It is hoped, however, that they would be 'rigorisable' by those who feel this more necessary than I do, and that the numerous extra assumptions and side-conditions that this would require would not subtract from such appearance of reality as the narratives may now possess. (Even to get them to that present semi-demi-rigorous state will require a profusion of stated assumptions that will try the patience of those with no particular taste for theory, and entail this part being a great deal longer than I would have wished.)

3. It can be suggested that, despite their oddity by contemporary standards, they are distinctly Ricardian in character. They could have been written in 1830 by a pupil of that master who chose to ignore the harvest-to-harvest carryover of crops that plays so large a part in Ricardo's system, and place predominant emphasis on the production role of fixed capital which plays so little (until in the third edition of his *Principles* he introduced his gnomic chapter on machinery). In a further attempt to mollify theoretical purists it can be suggested that those who have encountered my own little book *On Economic Growth* (1960) can largely skip this and the next chapter. The model here is very close to the 'second model' there analysed in some detail.

The exercise will be conducted in two stages. In the remainder of this chapter the model of 'purely' economic behaviour will be set out and put through a few paces with temporary postulates designed to postpone discussion of economic politics. Then in Chapter 3 some 'purely economic' histories will be deduced. Chapter 4 will provide the same miniature economic men with some rules of political behaviour, and Chapter 5 will revise the earlier economic histories to make them histories of economic and political evolution.

Even miniature versions of Economic Man have to be made quite complicated little creatures if they are to be seriously suggestive and very long discussion could be devoted to explaining and excusing the long rows of simplifying assumptions needed to constitute them. Here these assumptions will be stated briefly. Suffice it to remark that the rules of behaviour devised here are the fruit of numerous compromises between a desire to keep reasonably close to traditional views of the underlying realities of economic behaviour and the

urgent need, if the argument is to develop within a reasonable compass, to simplify in an extremely drastic manner.

Let us start with the five crucial, the strategic, assumptions that define the main outlines of the miniature worlds we are to construct and which also appear explicitly or implicitly in the majority of more conventional growth models of recent years.

1. A postulate of *uniformity*. All adult men at all times and places are exactly alike in economically relevant abilities, attitudes and tastes, that is in their economic potential. Only one interpersonal variation is admitted: some are innately more parsimonious than others. These attitudes and tastes will, however, be affected by climate in manners to be described later. (Women stay firmly in the home.)

2. A postulate of *intelligence*. They are highly intelligent. They know their own wants, abilities, and attitudes, the facts of the markets around them, the legal framework, the technology available, etc. Their foresight about matters relevant to their economic decisions is imperfect only in relation to the dates of their own deaths and illnesses and those of their immediate relatives and the eventual outcome of long-term investments, though about all those matters they act on knowledge of well-based probability distributions. (Effectively they are close to what will be called in Part II Near-Omniscient Men. This does not of course imply that they know in advance what they would do in situations utterly unlike those in which they find themselves, but it does imply that they have the wit to work out, mostly correctly, all the possibilities actually relevant.)

3. A postulate of *self-interest*. They are interested only in themselves, their wives and children, and the sick and aged of their immediate families. The utilities and disutilities of others mean nothing to them.

4. Their behaviour is *competitive*, atomistic. Two or more buying or selling the same productive service or finished goods will not act together to obtain a better price. (There are potential contradictions between this and the preceding pair of assumptions and it will be supposed that this one is overbearing.)

5. Temporarily, until this is revised in Chapter 4, it will be supposed that men are uniformly honest in their transactions, and devoted to the institutions of private property and *laissez-faire*, having no State.

The rest of the assumptions about individual behaviour to be listed here are designed to fill in this 'qualitative' framework with contents that could be (but here are not) spelled out in quantitative detail.

6. Their *attitudes to work* are describable in terms of the satisfaction or dissatisfaction they feel after different hours of daily work at particular jobs. (a) This is the same for all jobs. (b) There is positive pleasure in working a short time each day (say, one hour); thereafter for say nine hours in a temperate climate, work is uniformly displeasing but bearable in any hour so

long as the utility of the real wage earned in that hour is sufficient, but after ten hours (in a temperate climate) work becomes unbearable. (If our manikins' subsistence could not be secured by ten hours work they would die or go elsewhere forthwith.) (c) The level of disutility of work in the middle range of hours is higher and the length of work undergone before more becomes unbearable is lower in tropical than in temperate climates.

7. Their *current wants* are satisfied by four classes of commodity: hunger, satisfied by food; shelter by houses; what will be called 'comfort', satisfied by a vast miscellaneous class of goods which will be called 'manufactures'; and 'security' satisfied by the possession of assets that can be sold now or in the future to supplement current receipts from work or gift. (a) There are physical units for all these commodities. In these miniature worlds we suppose the index-number problems associated with the quantification of food and manufactures are solved in some unspecified way (more successful than any adopted in reality). The quantification of housing is specified below, when technology is summarised. Assets are houses, machines (also quantified later) and land (the unit of which is area). (b) There are minimum quantities of food, housing and manufactures without which life cannot be supported, all smaller in tropical than in temperate climates. (c) Beyond that minimum, wants at any moment are describable in terms of the utility in any period to the consumer (or purchaser) of successive units of each type of commodity. This starts very high in the case of food and declines quickly; it starts very high and declines less abruptly in the case of house-room; and less high and declining less abruptly yet in the case of comforts, though in both these too it eventually reaches zero. The utility of any quantity of these consumer goods is independent of the quantity of the others currently or later enjoyed. The initial levels are lower and their rates of decline are all somewhat greater, zero utility being reached at somewhat lower excesses over subsistence, in tropical than in temperate climates. (d) The present utility of an asset to its purchaser or owner is the utility he expects to obtain from selling it and consuming the proceeds (if he plans to sell it)—or the sum of annual utilities he enjoys at the thought of leaving it to his heirs—*plus* (in both cases) the utilities he hopes to obtain from the assets' current earnings, all somewhat discounted in proportion to their likely distance in time and any risks involved. This discount is high when real income is low, and decreases as it rises, but never disappears. Interpersonal variations in its size describe the variations in savings behaviour referred to in (1) above, the only interpersonal variations recognised. There is an upper limit to the amount of assets a man will hold for his own or his children's sake.

In assuming a corpus of technology for our miniature worlds we are doing two things: (a) we are making assumptions about the laws of nature in these imaginary worlds in so far as they dictate the variety of methods physically possible for making goods and services, and (b) we are making assumptions

about the knowledge of this ideal corpus achieved at any moment by the inhabitants of these worlds, a knowledge which counts as part of the 'behaviour' of Economic Man. We will here flatly assume that this knowledge is complete (so far as relevant) and that, in outline, in these miniature worlds the known technical possibilities are as follows:

8. (a) Food can be produced by labour and land alone, or by labour, land and machines. It is produced and has to be consumed within single years, which become the time unit of our toy histories. (b) Manufactures can be produced by labour and natural resources alone, or with the aid of machines as well. Manufactures also have to be produced and consumed in single years. (c) Houses can be produced with labour and natural resources, but machines cannot help. The meagrest kind of house—a mere shelter or tent—is like food and manufactures a consumption good (rebuilt annually) but larger or better houses, providing superior accommodation (and measured in 'size' by the man-years of labour required to produce them in what will shortly be defined as the standard environment), can be produced. These are permanent goods requiring no maintenance to keep them habitable in use, and they take a year to produce. (This may sound quite excessively odd: but it must be remembered that in fact houses have been the larger part of the capital-stock in most places for most of history.) (d) Machines are instruments of production, produced with labour and natural resources, which take a year to produce and last for ever, and when applied with labour and land in food production or with labour and natural resources in manufactures, increase output per head. They obey the 'Meccano Rule' invented by Professor Swan and can be costlessly converted into any other kind of machine for the same industry group: for example by adding two man-years of labour to a machine that cost ten man-years you can always get any machine that freshly-made would require twelve man-years. Machines cannot be used in the manufacture of machines. (A whole world of intractable complexities is excluded by these last two sub-assumptions.) (e) There are arrays of distinct, and discrete, techniques for producing each type of commodity, each specified by the amount of labour, land or natural resources, and size of machine (measured in man-years) required each year to produce a given output, in the standard environment. None of these involves infinite output per head. There are constant returns to scale, subject to the obvious qualification that in the case of farming this only applies while land is available. (How all this works out in terms of costs and returns will be explained in the next section.)

Since our miniature histories will cover immense periods of time and the evolution of population will be a most important element in determining their evolutions some rules of demographic behaviour will have to be provided for them. Those that will be assumed are:

9. (a) When real income is below subsistence level the population dies out

instantly (or so nearly so that we need not inquire into the economic implications of the process). (b) At the subsistence level it is constant with high birth and death rates and life is short. (c) As real income rises death and birth rates fall, first the former fastest and then the latter, so that, over a range of per capita real incomes, population rises and expectation of life increases until (d) a high level of real income is reached at and beyond which birth and death rates stabilise at a low level, and the average life is long. (e) Life in the tropics is supposed less healthy than in temperate climates so that at both the low and the high levels of stability birth and death rates are higher and expectation of life somewhat less than in corresponding situations in temperate climates.

Such assumptions entail changing rates of population increase as real income moves between the two limits, but our analysis will be so loose that the side effects of such changes will be neglected.

It may be worth noting here that (d) which may seem very questionable indeed is essential to the possibility that any of our histories should end in a state of universal stationary prosperity, since we have assumed a fixed supply of land, food essential to life, and no possibility of infinite food output per acre. The best that we could hope for without it would be a final situation in which, as the families of the rich expanded, some of the poor compensatingly died out, and at worst all histories would end in universal penury.

To define the natural environment further than is implicit in 8 three further assumptions may be made:

It is assumed (10) that the world is divided into separate areas, some tropical, some temperate, between which there is no communication. (If you will, you can put this as the assumption that between areas transport costs are infinite and within them zero.)

- (a) In each area farming land is limited and of uniform quality; though its quality will differ from area to area.
- (b) Natural resources equally differ from area to area in a marked fashion. But within each area they are in indefinitely large supply, inexhaustible, and can always be dug out or cut down at the same cost in effort per unit. Though the technique used may change there is no competition for space between farm land and natural resources or between either and housing.

Lastly a starting point is required for each history. It helps the comparison of the distinct evolutions which we wish to derive to have these as much alike as possible. It is supposed (11) that each starts with small populations, at or a little above subsistence level, with much unused land but no long-lasting man-produced assets whether machines or houses.

It is obvious from the number of general assumptions involved in setting up

even these vastly simplified economies (and the number of particular assumptions included under these) and the generality with which they are stated that the deduction of histories from them in a rigorous way would require very long argument, and a great deal of further detail in their specification. Here they will be argued out, for the sake of brevity, only in a very loose way. Nevertheless it seems necessary, before starting on general narratives, to set out in a rather sharper form, with the aid of a little algebra, a few points about the detailed economic characteristics of these model worlds. To do so will at least accelerate the exposition of the histories to which we will come in the next chapter.

Let us take one of our imaginary countries as our standard of reference.

In the initial situation all goods are made by handicraft methods, because there are as yet no machines. Also, we may assume that since conditions are primitive, everyone works the maximum hours of work physically bearable. In each type of output that handicraft technique which produces maximum output per year per man will be in use, even in agriculture where land being plentiful there is no need to use a technique which involves less output per head but achieves more per acre. As our unit of quantity for each type of commodity we may take the amount that is or might be produced in one year by one man by this technique. We may also take as our standard of value one (full) man-year of labour, denoting this by a \$ sign since there is no commodity of money to confuse us.

Then in this initial situation, given our mobile, competitive, equally efficient people, the price of each commodity produced—food, manufactures, and the primitive huts or tents which are the only housing known—is \$1 and all wages, the only kind of income, are \$1 also. (Naturally expenditure is devoted to buying only fractions of commodities.)

But in other countries things are already different. In tropical countries people cannot or will not work so long so that wages in terms of the international unit of our standard country's man-year of labour are less than \$1. And the prices of all commodities may be greater or less than \$1 in accordance with the comparative qualities of land and natural resources in them. All we know is that everywhere real wages are at least at or above the minimum subsistence packet of goods needed to permit the assumed population to exist. Our identical Economic Men may be leading very different working lives even in these primitive conditions: about their only common characteristics are that their economies are all egalitarian, with no rent-receiving land owners, no interest-receiving capitalists.

Let us next look at potential future costs and prices in the standard country. This involves formalising a little about the assumed body of technical knowledge.

In farming each possible technique can be described in terms of the area of land, the amount of machinery and the volume of output, all per man

[A Miniature Economic Man]

employed, associated with it. (We have assumed away all questions of the absolute scale of the productive unit.) Let us call the area Q , the amount of machinery R and the output O with subscripts 1 2 3 . . . to distinguish the individual techniques one from another. There may be an indefinite number of these but we will of course only be interested in those which are economically relevant, that is which might be the cheapest available in some concatenation of relative factor prices. Let us call the rental of an acre q and the rental of a unit of machinery r . Then the total costs under any technique n employing one man will be wages costs $\$1$, land rental $\$Q_n q$ and capital charges $\$R_n r$ and the output will be O_n and therefore unit costs

$$\$ \frac{1 + Q_n q + R_n r}{O_n}$$

Whatever technique has the lowest cost will be in use (or rather, as becomes very important when techniques are discrete, whatever technique or pair of techniques have the lowest cost).

These techniques will fall into two classes: the family of mechanised techniques, those using machinery, and what might be called peasant techniques, those using only land and labour. We start our histories with the one among the latter which has the highest output per man, by definition 1, and we may define the area of q_n acres such that the quantum of land this requires is 1 acre. However, if land gets scarce and a rent charge emerges it may become profitable to use another with lower output per head and thus higher wage costs per unit of output, but also, because it has a lower Q or acreage per head (i.e. a Q less than one) more than compensatingly lower rent charges per unit. But, of course, if the rental of capital (assumed so prohibitively high in the initial situation that no capital is in use anywhere) falls in time it may equally be that farming becomes mechanised, land and labour costs being saved by the use of costly machinery rather than land costs being saved by incurring more labour costs. In these imaginary histories, the evolution of costs and the changes of technique are especially complicated in farming, since this is the only industry potentially using three scarce factors whose relative prices may be changing.

In manufacturing the only relevant techniques are one handicraft technique among many that may be possible, that in use at the outset, the one with highest output per head, and a series of mechanised techniques such that each has associated with it greater output per head and more than proportionately greater capital per head than the last. The general expression for the cost of a manufacture is simply

[On Economic Man]

$$\$ \frac{1 + R_n r}{O_n}$$

If we number these techniques in the order of this series and call the handicraft technique zero, R_{zero} is zero, O_{zero} is by definition unity (and thus capital cost zero also) and we have

$$\begin{aligned} 1 &< O_1 < O_2 < O_3 \dots \\ 0 &< R_1 < R_2 < R_3 \dots \\ \text{and } \frac{O_1-1}{R_1} &> \frac{O_2-1}{R_2} > \frac{O_3-1}{R_3} \dots \end{aligned}$$

This third series may be said to describe the declining physical average productivity of capital. If we manipulate it a little by defining the difference between O_2 and O_1 as ΔO_2 , between R_2 and R_1 as ΔR_2 etc., so that we obtain

$$\frac{O_1}{R_1} > \frac{\Delta O_2}{\Delta R_2} > \frac{\Delta O_3}{\Delta R_3} \dots$$

We get declining incremental output/capital ratios which are as close to a declining marginal physical productivity of capital as our discontinuous techniques allow.

Machinery, we are supposing, can only be produced by handicrafts and we define the quantum of machinery as the amount one man can produce in one year. Hence when we are dealing with any capitalised technique in farming or manufactures R is the amount of capital per head, and $\$R$ is the value of capital per head (which is highly convenient). This permits us also to think of $\$r$ the rental of a unit of capital as numerically the same as r the rate of profit, the proportion of $\$1$ of capital required to hire its use for one year. (But the rate of profit must be distinguished from the rate of interest which is the constant stream of proportions of $\$1$ now worth $\$1$, since in these models there is usually a changing rate of profit, and there is no rate of interest.)

A brief account of the mechanisation process (the progress of capitalism) in the manufacturing sector as it will appear in our first imaginary history, that of the standard country now being discussed, may be given here, chiefly to get as much of this elementary algebra out of the way as soon as possible for the benefit of 'those who, rightly, dislike algebra'.¹

We start, by assumption, with every workman in whatever industry he is employed producing one unit of its product each year and the pattern of employment such that each unit sells for $\$1$, total income and expenditure being numerically equal to the working population. No machinery is being produced, which implies (if for the moment we abstract from the possibility of

¹ J. M. Keynes, *General Theory of Employment, Interest and Money*, p. 280n.

investment in permanent housing) that the highest rental any workman would find it worthwhile paying for a machine (which takes a year to produce) is less than the rental an investor would require before he could be induced to acquire machinery. As the price of a manufacture is now \$1, as produced by handicraft, and will remain so as long as handicrafts exist, this rental (per unit) is

$$\frac{O_1 - 1}{R_1}$$

Still less could any other mechanised technique be seriously contemplated since with all of them the demand price is lower yet.

Suppose, however, that for some reason or other this supply price falls to this maximum demand price, which we may call r_1 . A supply is then called forth, the demand becomes effective. Some investors abjure consumption to the extent of R_1 units or some multiple of it (hiring labour which would otherwise have produced consumption goods) and next year a machine or machines appears in some corner of manufacturing. For each machine produced total output is raised by $R_1 r$ units of commodity, not necessarily manufactures since if the price of manufactures threatened to fall below \$1 handicraftsmen would leave, attracted to industries where price threatened to rise. In equilibrium, provided there are still handicraftsmen left in manufactures, all prices remain at \$1, also all wage incomes, and there is a new profit income of \$ r_1 per unit of capital in use. Being richer yet the capitalists go on saving and investing in manufactures (again forgetting about housing), with rising profit incomes but all prices and other incomes unchanged and eventually all the handicraftsmen of manufactures have either gone over to handicraft employment in other sectors or become equipped with the machines of technique 1. At this point further investment in manufacturing only becomes possible by employing more labour, and this implies an absolute reduction in the total output of other goods. For this to be effected the price of manufactures has to fall; for this to be consistent with getting the labour wages in manufactures have to rise in terms of manufactures to \$ $\frac{1}{p}$ units (the new price) and rental both in terms of own produce and more importantly in value terms must fall correspondingly. All this can happen so long as the capitalists are prepared (as we will suppose they are) to accept this lower return: they have by now much larger incomes than they had when accumulation started, so that this is quite consistent with our assumption. Then, price and rentals, in linked fashion, fall until we reach the point at which technique 2 (with a higher capital/output ratio than technique 1 and therefore with capital costs per unit

which fall faster as rental falls) comes to have the same (and no longer higher) potential costs than technique 1: until we reach a P_2 and an r_2 such that

$$P_2 = \frac{1 + R_1 r_2}{O_1} = \frac{1 + R_2 r_2}{O_2}$$

At this point three things may be noticed:

- (a) the saving in labour costs per unit caused by switching to technique 2, $\frac{1}{O_1} - \frac{1}{O_2}$, is now equal (whereas when r was higher it was less than) to the increase in capital costs per unit $\frac{R_2}{O_2} - \frac{R_1}{O_1} r_2$ and will be greater if r falls further.
- (b) The increased value of output per head $\Delta O_2 P_2$ is equal to the increase capital charges per head $\Delta R_2 r_2$, and this rearranged as $r_2 = \frac{\Delta O_2}{\Delta R_2} P_2$ states that the value of output per increment of capital is equal to the rate of profit.
- (c) The rental at which this occurs can be expressed in purely technological terms:

$$r_2 = \frac{O_2}{O_1 R_2 - O_2 R_1}$$

Thus we have a second mechanisation process in manufactures during which again prices of goods and factors are pegged, followed by another fall in the price of manufactures and the rate of profit, until technique 3 is reached—all on the assumption that nothing prevents accumulation proceeding and bringing down the rate of profit.

Finally there is the housing sector, in which permanent houses of any size are erected by labour alone (in combination of course with free natural resources). We may define the size of a permanent house by its cost in man-years of labour as H which will also be its price $\$H$. Since these houses are, like machines, malleable—an absurdity which only avoids complications of detail and need not be taken too tragically—they must bring in the same rental per unit as machinery to those who invest in them, and this is all that is required of them by those who build and let them as a mode of saving, as permanent assets. But the demand for them is not, like the demand for machinery, derived from their ability to produce when, combined with current labour, goods for resale, an indirect demand, but a direct demand for 'house-room years' the consumption service they yield (and without the need for accompanying labour, since they are assumed to need no maintenance).

Let us suppose that in the initial situation of our standard countries, before there are any permanent houses, everybody spends one quarter of their

incomes of \$1 on the temporary shacks or tents which provide the only shelter they possess. Let us further suppose that the meanest permanent house possible, costing \$1 (after taking a year's time and a year's labour to erect) would be sufficiently superior to this, in the accommodation it provided, to be worth 30 cents a year. Then investment could still take place in housing so soon as the supply price of capital fell to 30 per cent, if consumers were content to switch expenditure from food and manufactures to pay house-hire. If the meanest permanent houses were, however, inferior to shacks, and only worth 20 cents, investment might still take place if the rate of profit fell to 20 per cent, for then the consumer might still obtain more than adequate compensation in the form of more of other goods. For the standard country—which has a temperate climate, an expression notoriously involving rain, snow and high winds obnoxious to shacks—it will be supposed that the return on the meanest permanent house thus derived is very high, higher than that available from investment in machinery to begin with. It will also be supposed that the utility of an additional \$1 worth of housing added to existing houses always declines, through taking a long time to reach zero.

These remarks concern potential costs and prices in the standard country, after it has departed from its initial position. But just as the initial set of prices and costs may differ greatly from one to another by reason of differences in natural resources and climatic effects on wants and abilities so may the range of later possibilities. Farm land may respond differently to the same applications of labour and capital. Differences in the availability of natural resources required for machinery may alter the cost of a particular kind of machine and the output that a given quantum of labour (which includes labour on extracting current materials) will elicit from it. The whole set of sets of Os Rs and Qs which we have for the standard country would need to be festooned with separate sets of multipliers and dividers for each other country if we were attempting a strict development. And similarly the quantity of work provided by individuals in given conditions may need international adjustments and their patterns of demand likewise: all quite consistently with the constant and universal nature of the economic psychology which is postulated. However, such elaboration will not be attempted in the histories to which, at last, we come. They will be sketched lightly, more especially after that of the most complex case which we take as standard.

3

Miniature Histories without States

On the basis of the depressingly numerous assumptions set out in the last chapter an indefinite number of miniature economies can be constructed. 'Human nature' will be the same in them all and at all times in each of them, but their climates and natural resources will vary from one to another, though constant in each. It is from these variations that differences in their evolutions will derive and it is with this range of possible histories that this chapter is concerned.

Simply because of these differences in climate and natural resources no two economies (in which these differ) can ever be in identical situations. But there will be one occasion in their histories when the differences in respect of prices inputs and incomes will be at their smallest and most easily understandable. This is when their situations are primitive, that is before land has become scarce (or in other words while the population is small relative to the supply of land) and before capital (whether in the form of machines or permanent housing) has begun to be accumulated. In considering the variety of possible evolutions, therefore, to start from primitive beginnings is not merely ambitious, it is also convenient analytically.

Imagine therefore a globe, some time at the end of prehistory, over which are scattered many tribes of Economic Men, each isolated in its own territory and (so far as this chapter is concerned) staying isolated. How they got there and how they became the kind of animal they were and remained are questions to be left unasked. Some of these tribes are in the temperate zone and some in the tropics, and this is already affecting their behaviour. Their territories vary in extent but in none is all the available agricultural land yet occupied. Their natural resources also vary, both in the quality of their agricultural land and

in availability of all kinds of materials needed for manufactures, houses and machines. Though no accumulation of permanent housing or machines has yet started these variations of resources are already responsible for variations in consumption levels, and hence in turn varying rates of growth of population. Perhaps in some areas, both temperate and tropical, there are tribes exactly at subsistence level, with constant population. They remain indefinitely in their stationary states. When in temperate climates they live rather longer and work harder to secure their higher level of bare necessities than they do in tropical areas but that is about all there is to be said of them. Elsewhere, however, nature is kinder, or so seems at least, and populations are rising. It is among these that the interesting evolutions are to be found.

Given those initial situations of which common characteristics are rising populations, land not yet scarce, accumulation not yet started, and human nature everywhere the same, it may not be immediately obvious why very various later histories should be displayed. But a little reflection will remind us that even in these generally similar starting points there are already differences which will promptly show themselves to be dynamically significant. For example the utility of permanent housing will be greater in temperate than in tropical climates and in those temperate communities in which materials for such houses are relatively cheap, and the standard of consumption is relatively high, investment in them by the unusually far-sighted (or parsimonious) will start at once. Similarly, differences in the amount of spare land per capita and rates of increase in population will bring different tribes to the doom of land scarcity and all that that implies after very different intervals. When they reach it what then happens will crucially depend on the different arrays of alternative peasant or capitalistic techniques of food production made possible by different resource endowments. There is, in fact, an almost embarrassing profusion of reasons why, whatever the apparent similarities of primitive conditions, later events should become highly diversified and divergent. There is some problem in knowing where most conveniently to start.

The procedure here will be to begin with four temperate climate histories, leaving tropical communities for briefer discussion later. The argument will start with Country A, one with a particularly variegated history. Then B, C and D will appear, as variants in which some phases of A's history disappear and some sequences are, so to speak, revised. A, in short, will be taken as the standard of reference and will require the lengthiest examination.

Country A

In the initial situation the community is living a little above the level of bare subsistence, with enough food and manufactures to allow the population to rise slowly. People shelter in ephemeral huts annually replaced as part of the daily round, which is laborious. They have as yet no machines, and land is still

so plentiful that it will not run out for several generations, even though the peasant technique yielding maximum output per hour of work requires much land per unit of output. Hence they still have no permanent assets (rent-earning land, machines or permanent houses) and their economy is still egalitarian.

Phase One. The temperate climate makes a permanent house a most desirable commodity for everyone. But all normal men are too short-sighted to invest in them: they are very much aware of the sacrifice of present food and comforts involved in their construction and greatly discount the distant pleasures of occupancy. However, this is not so with the minority of especially far-sighted and parsimonious men. They build for themselves and their families and there is thus a weak accumulation of permanent houses of a meagre kind going on.¹

If they have exceptionally extravagant children then the houses are sold to some of the exceptionally parsimonious of the next generation, but, as the population is rising and the distribution of parsimony and extravagance is constant net building continues. When the exceptionally parsimonious have similarly exceptional children they build houses for rental and perhaps enlarge their own. It is implicit in this, and may be made explicit, that rental of a house is still, while many normal men are without capital, above the annual cost of temporary shelters and below the profits that could be obtained from an equal expenditure of any potential machine.

Thus in this phase not only does the stock of houses increase but some upward dispersion of incomes occurs also. Even quite normal men who have the good fortune to inherit from several generations of miserly ancestors will be rich enough to save on their own account, to invest in simple permanent houses as well as to award themselves mansions.

Phase Two. One could imagine a community not unlike this in which the growth of the housing stock went so far that all were permanently housed and rents started to fall before any other dynamic process became involved. But in this standard case let us suppose that before then farming land becomes fully occupied, land scarcity intervening to interrupt the simple accumulation of housing just sketched.

One cannot deduce what will happen next unless one can postulate an initial distribution of land ownership at the point when land becomes effectively scarce. It seems broadly consonant with the assumptions made about

¹ There are two small difficulties here. One is that unless we postulate some incident coming from outside the system this accumulation will always have been going on since this community came into existence in prehistory. A shock of some kind is needed to start it: e.g. the accidental discovery of bricks. The other is that the obstacle to an individual investing in a house that consists in the substantial absolute size of the sacrifice of present consumption entailed in its construction, must not be allowed to be overcome by building it on some communal or joint-stock basis: some little organisational friction must be assumed to prevent this.

individual behaviour (and some modest recognition of the facts of geography and transport costs for which we have generally abstracted) to suppose some of the rich will have been buying empty land; that those who let permanent houses out for rent have also acquired the land around them; that peasants who own permanent houses also own their farms; that the handicraftsmen producing comforts do not own farmland; that some peasants still living in huts manage to retain ownership-rights over surrounding land and that many others do not. There will thus be a wide variety of scales of land ownership.

It is also necessary, of course, to specify the corpus of farming techniques made possible by the quality of the land and natural resources in this economy. It will be supposed (a) that there is quite a long succession of intensive peasant techniques: output per acre increasing quite fast with no great increase in labour per unit of output and no machines; (b) that only large doses of machines (capital) per man (and acre) will substantially increase output per man and acre so that it is only when the rate of profit (per unit of capital) is low that the mechanisation of farming can become profitable; but that, finally, (c) when that point is reached there is a succession of mechanised farming techniques which for additional doses of capital per acre and per man, greatly increase output.

Consider first, given these assumptions, the progress of food prices and the emergence of land rent in the earlier phases after land is first fully occupied. We start with each acre worked by one man and producing one unit of food per annum sold at \$1. With this technique, output cannot be raised, but demand is inelastic and price rises with increasing population. Call price \$P and the rise above \$1 \$q. Then the peasant who does not own his own acre can be compelled to pay \$q for the use of his land, this becoming rent per acre. (He surrenders $\frac{q}{1+q}$ units of food, and is left with $\frac{1}{1+q}$ but this is worth \$1 so he has no motive to leave, and nobody else has any motive to enter farming by offering to take less.)

But as P and q rise a second peasant technique, Technique 1, is reached, such that, at the point of transition: $1+q_1 = \frac{1+Q_1q_1}{O_1}$, where $O_1 < Q_1 < 1$; the increase in labour charges per unit of output, $(\frac{1}{O_1} - 1)$, is equal to the saving of rent charges per unit of output, $(q_1 - \frac{Q_1}{O_1}q_1)$; and output per acre (O_1/Q_1) and labour per acre ($\frac{1}{Q_1}$) are greater than the unity they were before. Price and rent are temporarily pegged at these levels as output rises with population, farm after farm being converted to the new technique. When the conversion is

complete price and rent must again rise, until a third peasant technique starts to take over and so on into a future as yet indefinite.²

This process will necessarily impoverish those who do not own land unless and until some consumer goods other than food decline in price, and of these, at this point, the only one that conceivably might is permanent housing (to which we shall come in a moment) since manufactures are handicrafts. But anyone owning an acre or more (to begin with) will be enriched since he will gain more from rent than he will lose in higher food prices. In short there is a transfer of income to landlords, an increase in inequality. This is simple enough but events in the capital market, so far confined to houses, now started getting distinctly complicated.

Land now carries an annual payment for its use, a payment that will, at intervals, rise. It becomes a permanent income-bearing asset, like houses. Unlike them (on the absurd simplifying assumption for which an embarrassed apology has already been made) acres are not physically convertible into other goods, and they are themselves non-producible. Land will therefore have a price as an asset, and will indeed have had one so soon as the prospect of scarcity appeared over the horizon. Hence the exceptionally parsimonious start acquiring land as well as or instead of houses.

Given the high intelligence of the inhabitants of this toy world, the price of land must be such that, at the margin, individual purchasers of capital assets are indifferent whether they spend \$1 on houses or land. The cost of a house of given size remaining constant, the course of the price of land per acre, say \$L, will thus depend on the evolution of demand for house room, the progress of rent per acre and the development of the supply of net savings. The rise in the price of food will tempt the landless to abandon rented houses, and sell houses unusually provident parents had purchased, and extravagant people owning or inheriting land will now (something they could not do before) sell their land for the sake of present consumption. On the other hand large landowners will be receiving increasing rents, making their incomes large enough to make the rising price of food unimportant to them, and inducing all but the abnormally improvident among them to start saving. At the same time some of the small landlords previously outside the minority of savers will be coming in as their rentals increase.

Plainly the course of events depends crucially on the exact relationship between a whole range of physical and psychological magnitudes. It will be supposed, for this country, that they are such that the forces pushing up the price of land overbear those working in the opposite direction, and they do so

² The curiously jerky nature of this evolution simply derives from the assumption of discontinuities in the array of agricultural techniques. The reader whose *minimum sensible* is infinitesimal can adjust the analysis to his taste.

to such an extent as to outstrip the rise in rent per acre. Hence what might be called the rate of rent in year n namely

$$\frac{q_n + (L_{n-1} - L_n)}{L_n}$$

actually falls as time goes on. The rent of \$1 spent on houses has to fall with it. This, however, is consistent with no increase, indeed possibly a decrease, in investment in housing. The landless may be being compelled to sell any houses they have as the price of food rises, and the new demand for houses will come from landowners, of whom the richer will be enlarging old houses or building new mansions.

Furthermore land-holdings will become increasingly unequal. The extravagant in each generation will be selling their holdings, and their landless children, facing higher food prices, higher land prices, and a lower rate of rent will be unable to buy their way back into the ever smaller and ever more opulent landlord class.

Thus in this second phase landlords came to rule the roast over an ever larger mass of landless labourers, the former becoming ever fewer and ever richer, the latter ever poorer and more multitudinous. The third class, the manufacturers, still sell their products at \$1, but their real incomes, like those of landless peasants, decline with the rising price of food, and they sell their products less and less to each other and the peasantry, more and more to the landlords. If the assumptions made could be interpreted to allow personal services as a handicraft, at this stage of the model the landlords can be allowed to live in ever larger palaces with ever more servants, cultivating the arts. Since the quantity of labour required per unit of food is rising, and food is the most urgent of wants the manufacturers seem certain to be a diminishing proportion of the total labour force.

Phase Three. In this history these processes are interrupted well before the landless are reduced to bare subsistence, with a consequent cessation, except among landowners,³ of population growth. The rate of rent and the return on investment in housing, as has been noticed, are falling. They fall, in this economy, to the highest level of potential return from capital in manufactures. (This is, however, still above that from capital in agriculture, a possibility the less artificial-looking if one thinks of the latter as being, for example, irrigation and the former machinery.) The industrialisation of manufactures starts. It is financed by wealthy land- and house-owners to whom the acquisition of machines now appears as a mode of acquiring income-bearing assets alternative to land and houses. It must be noticed, however, that since rent per acre rises at intervals and dividends from machines will fall with each of the successive rounds of mechanisation the 'rate of rent' at which mechanisation

³ And even among them too if they are rich enough.

starts must be below the 'rate of current dividend'. However, the only land that comes on the market is now from the extravagant heirs of wealthy farmers, and the normally endowed and the exceptionally parsimonious among the farmers and the owners of stocks of houses now have the whole field of investment in machinery open to them: some slowing-down of the rate of appreciation of the price of land will be sufficient to bring the prices of the two alternative avenues of investment into equilibrium.

Nothing in the assumptions made prescribes how the rich arrange their portfolios of land, houses and machines, but it adds an innocent touch of realism to suppose that the first preference of landowners lies in increasing their land-holdings and that those who hold houses tend to buy machines. Then in this phase there is the beginning of the emergence of a distinct class of industrial capitalists. In this phase too for the first time some prices fall, those of manufactures, and there is thus some slight offset, for the landless poor, to the intermittent rise in food prices which has been impoverishing them all.

Phase Four. So soon as land becomes scarce, any mechanised farming technique which allows a higher output per acre saves rent costs per unit of output, and of course if it also saves the labour costs as well it is doubly blest. All the same if rent per acre is not large, and a lot of machinery is required per unit of output, and its unit rental is high, these blessings have curses attached which overbear them. But as time goes on, rent rises and the rate of profit falls, and in this story a round of rent-saving mechanisation eventually becomes profitable. Using the earlier notation and, for simplicity of subscripts numbering the prevalent handicraft technique 1 (though it may be far along the list of them) and the mechanised technique 2 (though it is the first that comes into use), we have, at the point of transition:

$$p = \frac{1+Q_1q}{O_1} = \frac{1+Q_2q+R_2r}{O_2}$$

Here the increased capital charges per unit of output, $\$ \frac{R_2r}{O_2}$ (in this instance the whole of these charges) are just offset by the savings in labour costs per unit $\$ \frac{1}{O_1} - \frac{1}{O_2}$ and rent charge per unit $\$ (\frac{Q_1}{O_1} - \frac{Q_2}{O_2})q$. Also r , considered as the rental per unit of capital that will be offered by a farmer, will be the sum of the value of the additional output per man each unit gives rise to and the saving of rent per man, since

$$r = \frac{O_2 - O_1}{R_2}p + \frac{Q_1 - Q_2}{R_2}q$$

It is quite possible that output per man actually declines with the switch, labour costs per unit rising. In such a case the whole of the productivity of the

capital would derive from its land-saving quality, which would have to be large enough to overbear its labour-costing quality. Here, however, it will be assumed that resources are such that all the successive mechanised techniques secure their profitability from their joint labour and land-saving capacities.

In a general way the mechanisation of farming which now starts is a mere extension of the progress of capitalism supposed to have already started in manufactures, and the possibility of this first and later rounds of mechanisation in farming merely reduces the continued rise of food prices that would otherwise have occurred, as has been done by the succession of increasingly labour-intensive peasant techniques of earlier days. As each new technique comes in and spreads across the land its extension allows an increase in food output at constant prices and constant rent (provided the rate of profit remains the same). When each re-mechanisation is completed price and rent rise until the next technique becomes profitable as before, though a fall in the rate of profit caused by the temporary exhaustion of investment opportunities in farming and the completion of a round in manufacturing may hasten this next re-mechanisation of farming.

Hence in this phase there is (unlike previous phases) investment of capital in farming as well as manufactures and houses, rent still rises at intervals, so do food prices (as in the two which went before but not the first), while the prices of manufactures fall (as in the one before but not the first two).

Phase Five. The situation is reached when (a) a mechanised farming technique is in course of adoption which has a considerably larger output per acre than that already in use and (b) the amount of capital becoming available to farming annually at the current rate of profit is so large that the increased output of food to which its employment would give rise is in excess of the quantity that can be sold (despite population increase and the rising income from profits) at the existing price. Plainly no plots of land in use with the old technique will go out of use, since that would remove their owners' rents altogether, leaving other landowners enjoying rents: and that is inconsistent with competition among landholders. Equally the capital charges per unit would be larger for the new capital intensive technique than for the old. But a fall in rent per acre will preserve the equality of costs in the two techniques: the old technique having greater rent charges and smaller capital charges (per unit of output) than the new, but because the new has more output per acre, rent per acre in the two techniques can be kept equal. Thus there is now an absolute fall in the price of food for the first time, accompanied, also for the first time, by a fall in rents. Real wages are now unambiguously rising: so long as accumulation per capita is proceeding all consumption goods are falling in price—food, manufactures and house rents. And the unit cost of houses and machinery is also unchanged though the return on them is falling. Also the price of land—previously rising because rent per acre was rising (and because the rates of profit and house rent were falling)—must now start falling. The

landlords begin to make capital losses on their land-holdings. Also employment in the farm sector begins to fall, allowing that in the manufacturing and capital goods sectors to rise faster. In fact capitalism begins to overwhelm the landlords.

Phase Six. The real wage reaches the postulated level at which population ceases to increase. The proportion of investment hitherto required merely to maintain the per capita capital stock becomes available (like the rest of earlier investment) to increase it. It can now only be used to re-equip an existing labour force: none goes to equip increments of population. This, naturally, will accelerate the increase in capital per head, the adoption of successively more capital intensive techniques, and the fall in the rate of profit. It also makes it very possible that land now ceases altogether to be scarce, and land rents, so large a feature of this history after its initial phase, vanish, leaving houses and machines as the only income-earning assets. (We are abstracting from rents of location.)

Phase Seven. Here may be located two final changes preceding the cessation of growth. (a) The fall in the rate of profit, and the increasing stock of capital possessed by almost everyone (since now even the impecunious are rich enough to save without great sacrifice) eventually reduces and finally extinguishes net saving. (b) Hours of work have so far been assumed to remain at the maximum. It could easily have been permitted that the rich started to idle earlier, and even that landlords after becoming idle in the generations of high rents had to go to work again when their rents fell. But now that real wages are very high and potentially rising fast, people sacrifice some of what they might get for leisure: they deliberately let their wages fall gradually below \$1. Though when accumulation ceases they are still working rather more than they would for the mere enjoyment of work, their hours are well below the maximum.

Thus in the final stationary state in which this toy history ends, everyone has plenty of leisure; real wages are very high; everyone owns property though some more than others; there is no net saving, though the exceptionally parsimonious are buying capital from the exceptionally extravagant; the rate of profit is very low, so that income is fairly equally distributed, and people are well-housed.

Country B

With two exceptions everything in Country B is exactly the same as in the standard Country A. The exceptions are that B's resources for the production of permanent houses and machinery are very much superior, much less labour being required to produce the same articles than in A. The consequences are large.

As in A permanent homes are the most profitable first use of savings: and

much more profitable because of the relative cheapness of their construction. In the initial situation not only the extremely parsimonious but anyone slightly more than of average providence invests in their construction. The population is quickly housed in its own or rented permanent houses. After a period in which the size and quality is improved as the rate of house-rental falls, the return on investment falls to the highest rate available in manufacturing (also higher than in A). Industrialisation starts from the savings of all but the more extravagant householders before land becomes scarce. After the first round of mechanisation of manufactures is completed real wages, which first rose when house rents began to fall, rise again because manufactures too are cheapened. Almost everyone starts saving: investment is not as in A the exclusive privilege of the exceptionally greedy or the landowning.

In this territory the mechanisation of farming starts early. Not only are capital goods relatively cheaper per unit than in A, but before land becomes scarce techniques which save much labour but use more land than does the optimum peasant technique can come into use. They would be impossible in A. Provided later there are further mechanisations which, made for their labour-saving qualities, also incidentally save land, the scarcity of land, and with it the emergence of rent, are wholly avoided. Food prices decrease and real wages reach the point (the same in terms of absolute level as in A) at which population stabilises while there is still spare land. (There will have to be sufficient of this, it is true, to meet the further demand for food as that stable population gets even richer: but with food in inelastic demand this need not be in any way unimaginable, even though B's area be no larger than A's.)

Thus in effect B jumps straight from the first to the last phases of A's history. It omits all the episodes involving the scarcity of land. No landlords appear; there is no sag in real wages because of rising food prices. No prices indeed rise at all: all fall, first house rents then manufactures, finally food. But it is not a wholly simple growth nevertheless. In the early generations of accumulation an inequality of incomes as great as or greater than anything that was seen in the standard case might appear: but due now to the high rate of profit allowing the quick amassing of great fortunes in machinery and houses by the parsimonious and their heirs and not to the transfer of income from those unlucky enough not to inherit land, or too extravagant to keep it.

Country C

Now vary the standard Country A's resource endowment in another way, to reach Country C. Let its materials for building permanent houses and for constructing manufacturing machinery be as much better than A's as were B's. But let it have less spare land than they and let this land be of such a quality that mechanical capital is unproductive on it, that labour-intensification without capital is also unproductive; and that increased output per acre

requires investment in the form of irrigation works, costly in themselves, requiring intensive maintenance and imposing the necessity of laborious weeding and hand-planting. In other words the only fruitful farming techniques available when the first peasant technique has spread over the whole land are those in which the value-productivity of investment wholly derives from the saving of land per unit of output, and this is achieved only by increasing labour per unit of output at the same time.

C starts off just as B did. Everyone is quickly and well housed, most building their own, the parsimonious also letting to the extravagant, and becoming accumulators of houses. House rents fall. The mechanisation of manufactures starts. Real wages rise and an industrial capitalist class emerges. But then land becomes scarce, the price of food rises, rent appears, the capitalists and the provident buy land from the extravagant, and become recipients of a new source of transfer income. While the acquisition of land from the extravagant as an alternative to the purchase of machinery limits the growth in the rate of investment (since it raised consumption in a fully employed situation), investment, we may suppose, continues at a substantial level and the rates of house rent and profit continue to decline and, with them, the price of manufactures.

Then the rise in the price of food (with its attendant rise in rent per acre) and the fall in the rate of profit make profitable a switch in farming technique to some first irrigation technique, one requiring relatively little capital per unit of output (compared with those to come), but raising output per acre and labour costs too. This pegs rents and food prices while the new technique spreads across the scene at some cost to other savings. When the conversion is completed prices and rent rise once more, until a further elaboration of the irrigation system becomes profitable. But eventually somewhere in this sequence a technique is reached so expensive in terms of capital that its spread at the rate required to ensure a sufficient increase in the supply of food to keep the price at its present level requires more than all the net investment available at the present rate of profit. The demand for food being extremely inelastic both the rate of profit and rent are now forced up (in a manner obverse to their joint decline in the history of A).

Output per capita is now unambiguously declining in this community. Even if (because of population increase) the absolute production of housing and manufactures increases the houses of the poorer members of the populace will be smaller. Manufacturing techniques will begin to decay, to be less capital intensive than they were, reverting towards handicrafts. All prices rise (except those of units of irrigation capital, and other capital instruments). Real wages are declining, even though the capitalists (now chiefly combining land-ownership and capital ownership as owners of irrigation works) are still getting richer and fewer. Land shortage has overwhelmed earlier progress.

In the final phase wages approach the subsistence level and population growth among the poor ceases, just (we may suppose) when the saturation of

the wants of the rich is reducing their net savings to zero and has stopped their population growth also. Thus C ends with the maximum inequality of incomes and property ownership. Though, on the assumptions made, no place has been left for the occasional famine resulting from a sequence of exceptionally bad seasons, or a burst of population increase after a bunch of good ones—let alone *jacqueries*—such accidents could plainly lead to grave instabilities here.

Country D

Next consider a variant of A in which everything is as in A except that the specific resources required for capital goods in manufacturing and farming are simply not available. (It is, say, a territory deprived of base metals of all kinds with farm-land unsuitable for irrigation.)

In the first phase events proceed as in A. There is some accumulation of houses to begin with, slower than B or C because the return on investment in permanent houses is less; then land scarcity and rent and the rising price of food make their simultaneous appearance. A landlord class emerges. Their savings propensities (which are the same as those of all the other models, by assumption) are such that the price of land rises faster than rent per acre. In each generation the extravagant sell out to the parsimonious and cannot get back and the number of landlords diminishes as they get on average richer and richer with larger average holdings. But though the rate of rent declines it does not as in A fall to the highest rate of return on investment in farming or manufactures because this is virtually zero. The progression to higher rents and land prices and food prices is stopped by another limit being reached: the landless peasants are driven down to the subsistence level and population growth ceases among them. It is well to suppose that it has already ceased or does so very soon among the small landlord class also, for the reason of affluence rather than poverty.

Even beyond this point it is possible that landownership becomes more concentrated yet. But the larger the average holding and associated income the more preposterously extravagant a man must be to sell up all his land, or so much of it that his heir, if normal or extravagant, is obliged (or chooses) to sink to the peasantry. So the eventual position will be that the distribution of land-holding stabilises, with the whole farming area owned by a tiny minority of the population, which remains of constant size. The more extravagant will at any rate be selling some land to the exceptionally greedy but the heirs of the latter will usually sell it back to the heirs of the former.

In the course of this evolution it may be supposed that the poor, to keep themselves fed, have had to revert to mere huts for shelter, and consume far fewer manufactures than they did to begin with. The manufacturing sector (always a handicraft sector) will become heavily concentrated upon the provision of goods and services to the landlords who will live in palaces.

This end position is of course exceedingly like that of model C with the only difference that in the latter there was and in the former there was not a terminal stock of capital invested in farming. It is also the position which the standard case approached, but just escaped because of the efficiency of capital in farming.

Tropical Economies

The four histories just sketched were for temperate climates and they differed only because the quantity and quality of their land and the quality of materials for building, manufactures and capital goods differed. But in constructing a miniature world for the accommodation of miniature economic men it seems reasonable to allow also, if only in an equally schematic fashion, for differences in climate. In assumptions 6, 7 and 9 set out in the last chapter it was provided that in tropical climates economic behaviour differed in three ways from the temperate norm: labour became intolerably arduous after fewer hours; material wants both at the level of bare subsistence and at the maximum of affluence were less; and, again both at subsistence and affluence levels, birth and death rates were higher.

If tropical analogues of the economies examined in the last four sections are sought it is easy enough to think of them as having the same resources throughout. But to provide them with corresponding starting points—each, that is, with spare land, and a standard of living a little above subsistence, allowing some increase of population—one has to allow that this standard is materially inferior. (It is well that we are not in this part discussing comparative welfare in psychological terms, since so many of the elementary material requirements of temperate climates seem to be means of avoiding discomforts imposed by those climates.)

The crucial differences in the later development of these analogues derive from the lower hours of work (which, because of an annual unit, raises the relative cost and reduces the physical productivity of investment); the relative shortness of life (which lowers the relative desire to invest for old age); and satiation of material wants at a lower level (which causes the very rich, should they appear, to stop saving earlier). The tropical version of the sad story of D would be as sad but shorter. The tropical version of the frustrated development of C might omit the phase of progress. Perhaps more interesting is a possibility which arises when the standard economy A is transferred to the tropics. In that history the Malthusian doom which awaits those who breed but do not (or cannot) invest enough was narrowly averted by the continued parsimony of the rich, land scarcity being overcome, and the pre-eminent position of landowners being eventually extruded by their investment in land-saving agricultural techniques. In the tropics, though the resources might

be the same, the will might be lacking and A's history might be transmogrified into C's.

Analogously the tropical version of B, the temperate economy with an uninterrupted progress to affluence because of the excellence of its resources, and their peculiar adaptation to the requirements of investment, might have a less attractive history. It might fail to avoid a phase of land shortage, through breeding as fast but accumulating more slowly than its temperate counterpart: in fact its history might follow the sequences of the temperate A.

Thus in our miniature world, with our toy Economic Men affected in the way supposed by climate, the tropics might, resources varying in the same way, merely exhibit some diminished and degraded versions of the histories of temperate regions—at any rate in the small selection of numerous possibilities here sketched out. However, there is one little tropical history unimaginable in an area with much cold weather which might be given here to complete the anthology.

Country E

This starts with some small community a little above the subsistence level as in the earlier stories. It is, however, in a tropical setting which causes very extreme variations in wants from the temperate zone, and its resources are also unusual.

The climate is hot and with little seasonal variation. Shelter beyond a minimum cover against rain is inessential; clothing is positively uncomfortable and unhealthy (though it may have attractions as a decoration on grand occasions) and other 'manufactures', beyond a few cooking pots and pans and hammocks and so forth, are equally inessential. Resources are by comparison with any of the economies so far discussed exceedingly unbalanced. Food is produced with extreme ease: an hour or so's labour daily will produce more sweet potatoes than several people could bear to eat. There are, however, no resources for machinery in the ordinary sense—no metals—and the terrain would make irrigation expensive and useless even if it were ever required. There are no supplies available for many kinds of manufactures, or for the easy erection of comfortable permanent buildings; good wood may be plentiful but there is nothing to cut it with except flint axes laborious to make and quickly broken; the hammering of bark to produce cloth is time-consuming, the result very perishable, and so on.

This community to begin with is in the same egalitarian state as the others. But because food is so easily come by, and other wants are so small (and their satisfaction so exceedingly difficult) hours of work are extremely short, well below the maximum supposed tolerable (lower though that is in tropical conditions than in temperate), and only little above the minimum that is positively pleasurable. Given the tropical rate of disutility of work between

these limits, the extremely low physical productivity of work in manufactures and the abrupt fall in the marginal utility of manufactures, nobody bothers, after satisfying their food needs, to work very long. Nor do even the most parsimonious work to build themselves permanent houses: they are extremely costly in effort, the consumer service they yield is not large; and since relatives can easily provide for their minor food wants in old age they have no attraction as permanent assets. These people are in real terms exceedingly poor, naked, barely sheltered, but they are well fed and with a great deal of leisure. (Only, indeed, if the assumptions made had ventured upon a utility schedule for leisure, independent of real income, could we tell whether their individual total welfares were less than that of peoples materially much richer than they.)

All the spare land, as in most of the other histories, is eventually used up, and though more intensive use is highly productive, it is not quite so productive as the technique so far used. There is a small rent to be paid to those who have, by foresight, acquired rights to larger plots than the average, or who, having smaller than average families, can let others use their plots. Rent can be paid only in kind—in food, in manufactures, or in labour for the construction of permanent houses. But the (relatively) wealthy have little use for more food or more manufactures for personal consumption. They end by leading their tenants in the construction of permanent dwellings and there giving feasts—to each other and their tenants too. This keeps them, and their wives, sufficiently busy in those non-productive leisure activities somewhat to reduce their numbers of surviving children; while their tenants have to work sufficiently hard in a more crowded environment for the death rate of the (relatively) poor to rise a little. Population stabilises again: the very modest evolution of this extreme variant of tropical versions of D is completed.

The large deterioration of the position of the landless in more 'normal' variants is here replaced by the presence of some modest duty to work for the big men when land holdings are insufficient, and the decline in real income is partly replaced by having to work longer but still short hours. Nor do the rich, here, become so much materially richer than the poor as they do in temperate areas: their wants are more easily satisfied. Further, climatic conditions are such that their expectations of life are not much increased by their enrichment. In the other variants the peasantry have much shorter lives than the rich: here the difference is smaller. This society may have reached its Malthusian doom but—the brevity of life apart—its final state is little worse for anyone than its starting point.

The set of economic histories just sketched out are, it is suggested, just recognisable as caricatures of real histories. Country A starting as a peasant economy and running in succession through Feudalism, Early, Middle and Late capitalism has some noticeable affinities with English economic history.

Country B rushing quickly and smoothly from a wealthy peasantry to high capitalism resembles (as closely as one could expect at this level of caricature) the United States. Country C has a Chinese air about it; Country D might be mediaeval India; and in almost contemporary New Guinea can be seen the lineaments of Country E, as Mr E. K. Fisk has shown.

However, it may be that the immediate purpose of this chapter is served if the reader is persuaded that it seems possible to concoct many diverse and variegated models of purely economic evolution from a single and quite conventional-looking model of Economic Man. It is not necessary to suppose that his bundle of propensities and his bodies of knowledge vary from time to time and place to place. He can be supposed to be a constant and universal phenomenon. All that is required is that the geographical environments in which he is supposed to find himself at the beginning of the periods that interest us should be diverse, and diverse only in ways that somewhat resemble variations in climate and resources we know about.

If this be accepted, some plausibility has been acquired by the proposition that the conventional model of Economic Man is an even more powerful construction than most of us have been brought up to think. The rational well-informed self-regarding mode of behaviour apparently explains more economic events both in time and space than we have realised. Nevertheless miniature economic histories in which the economic activities of the state do not appear at all and in which each economy remains in entire isolation from all others obviously miss out an enormous tract of reality and the plausibility of the behaviour producing them thereby remains a mere possibility rather than even a faint probability. In particular if one had to concede that the political events which have so vast a role in real economic histories could only be explained by some quite different mode of human behaviour, something variable, irrational, ill-informed and replete with unselfish and other-regarding motivation, much doubt would be reflected on the hypotheses about purely economic behaviour: normal men cannot be quite so incoherent as that. Consequently the case for belief in Economic Man would be doubly strengthened if (a) a plausible hypothesis could be advanced of political behaviour being always everywhere, about as rational well-informed and self-regarding as economic and (b) if, incorporating a miniature version of this behaviour into the miniature histories already produced took them a stage further towards resembling the real thing. And if also by incorporating some international trade and international politics without significantly varying these miniature individual psychologies further the fairy story isolation of these histories could be discarded and some plausible-looking international histories could be made to appear in their place, well, better still. To these tasks the next two chapters will be devoted.

A kindly-meant hint to the reader may be in order here. These chapters are, unavoidably, long and their sole purpose is to strengthen the case for judging

[On Economic Man]

Economic Man to be, by the objective/deductive criterion, a good model. Whether or not they succeed in doing so it is fair to record here that in Part II when he is judged subjectively/inductively we will not further discuss his politics—we will be fully occupied by a rather microscopic investigation of his purely economic thinking. Hence the reader who is (as he should be) oppressed by the shortage of reading time, and prepared to agree that, even on the limited basis of this and the previous chapter, Economic Man apparently passes the first test can, if he wishes, jump ahead. Nevertheless the useful concerns of economics lie so largely in the political field, and there is so obvious a symbiosis between the economic and political behaviours of individuals that (whether or not that behaviour is well-represented by Economic Man) these chapters are, I hope, excusably included here. They also serve to indicate distant links between the argument of this essay and much contemporary American work on political economy in which Economic Man reigns supreme and the Marxist approach with which so much of that is easily reconciled. (If a good-tempered Marxism be not a contradiction in terms much of it will be found too in what follows.)

4

Miniature Economic Man as Politician

In the preceding argument the whole problem of the state was deferred by the simple, if insolent, device of flatly assuming that all our miniature Economic Men were at all times and places orderly, honourable characters, believers in free enterprise, private property and content with the consequences of the free bargains they made with their fellows. Consequently they could live in a condition of anarchy, and yet enjoy all the advantages and disadvantages of text-book *laissez-faire*.

It would have been easy to reach the minimal kind of state usually assumed in *laissez-faire* models by a trivial modification of this highly artificial postulate. It could have been supposed that, while this was normal belief attitude and behaviour, there was always a minority who would cheat and steal and murder in pursuit of their economic ends; that the majority agreed that it was to all their individual advantages that such deviants be restrained; that, technically speaking, it was usually the cheapest and most efficient way of restraining them to have a settled code of property law and business procedure and a regular machinery to restrain and punish infractions of it; and that those employed to perform this service, the officers of the *laissez-faire* state, were so cheap in absolute terms, required such a tiny per capita expenditure, that the modes of their finance and organisation were too trivial to bother about. It could further have been agreed that in the primitive conditions at the beginnings of the histories worked out, no organised state of this kind was necessary—custom and village meetings would suffice—and that the state only really emerged as a service industry when population was greater, and there was more property, more complex chains of transactions, more dealings between strangers to protect.

This would have added a touch of realism but it would not of course have got anywhere towards explaining in terms of conventional economic

behaviour the huge variety of things states, ancient and modern, have done. However, on closer inspection it provides the essential clue. Such a state, even though it has only to protect very simple property rights must, as a necessity for the performance of this duty, possess predominant force. It has to deter and punish the violent wherever they appear, and however intelligent and well-informed we assume people to be it would be silly to suppose that they can forecast crimes and identify criminals in advance. But once this organisation (which is necessarily unique since no two bodies can have predominant power) exists, any man who is intelligently pursuing his economic ends (and whose achievement of them could be aided by the exercise of the state's power) will wish the state to intervene to provide its help. A belief in *laissez-faire* is in fact in contradiction to the selfish and intelligent pursuit of economic ends whenever the state's intervention can be secured at a cost less than the benefit it can confer on the individual or individuals in favour of whom it acts. The rational man must be regarded as having three ways in which to satisfy his economic wants: by isolated Crusoe-like activity; by bargaining in the private market; or by securing the interference of the state to improve in one way or another on what he could achieve through the other modes of action. If rational, he will choose whichever is the most efficient.

By this reasoning the state, so far from being the defender of *laissez-faire*, is its particular enemy. It may be regarded as a service industry of a peculiar kind, that which provides interventions, backed by force, designed to alter what would otherwise go on in free-bargaining (or Crusoe-like) situations. But though the mere preservation of law and order may be the oldest and most universal of these interventions it is by no means the only one possible. Situations in which it is are, after all, empirically most uncommon. Usually this 'industry' has a very long and heterogeneous list of 'outputs'.

If this analogy between the state and a service industry be treated as much more than a mere analogy—rather as the simple essence of the matter—it becomes convenient and logically plausible to extend to the political activity of all involved in the supply and demand of the state's services the same qualitative kind of behaviour as, it is being supposed, is being exhibited in the private market. So far as a closer inspection of the technical function of the political market permits we may assume that the same qualities of rationality, good information and selfishness are seen in both. Economic Man becomes Politico-Economic Man, at any rate as regards these political activities which impinge on the prices and outputs of goods and services. Following up this simplification quite ruthlessly the next section contains a short account of the structure of a miniature political system regarded as the 'political market' that exists side by side with—is organically mixed-up with—the private economic system. Having given that account in very general and static terms we can move on to constructing a version of this market's outputs for incorporation,

in the next chapter, into revised versions of the dynamic histories worked out in chapter 3.

The essentials of the political market are as follows:

1. What it produces are (a) laws and (b) organisations for the administration of these laws. A law by definition is an intervention in what would otherwise have gone on in the private market, backed by the sanction of superior force.
2. Because of its superior force the state is necessarily a monopoly (or at any rate a hierarchy of forces subordinate to one of their number).
3. But because the controllers of such a monopoly, given their superior force, could, unless restrained, be immensely exploitative, it is to the extreme interest of the consumers to prevent this, and given the assumption that these consumers are farsighted and intelligent they will do so; constraining the government to provide legislation at cost and ready to topple it if it does not. This the legislators put up with because they too are economic men content to work for normal wages. Thus the state is, though a monopoly, one constrained to behave like a competitive firm by fear of takeover.
4. The cost of an act of legislation—as distinct from the cost of its administration—may be treated as so small as to be negligible.
5. It is the characteristic of any law that it damages the position of some people and improves that of others. (Even a law against murder is offensive to murderers. If a law were to the best interest of everyone they would do what it prescribes voluntarily.) Hence in the political market there is the phenomenon of negative demand, and it is necessary to think of the demand for a law as a net total.
6. Because laws are serious matters it may be assumed that everyone (or at any rate a sufficient majority of the politically powerful) wants them certain. This implies that they are not frequently changed and are not made for the advantage or detriment of single individuals. Hence they are, as products, 'lumpy' and long-lasting.
7. Hence, in turn, an individual's demand for a law can be thought of as derived from the discounted total utility he will gain from its passage and continued enforcement (and his negative demand, if it be adverse to his interests, as a discounted negative utility). This is, of course, just the way in which one would approach an individual's demand for a work of art he does not possess, another lumpy long-lasting thing, or his negative demand for being deprived of such a work now in his possession. But whereas in that case it would be normal to translate this total utility or disutility, via a schedule of the utility of money, into a purchase or sale price in terms of money, this is inconvenient in the case of laws which are rarely (we like to think) bought and sold in such a way. The alternative (equally available in the case of the work of art) is to express it in terms of the effort or work that, in his present economic situation, a man is prepared to make (or buy) to get the law passed

or rejected, effort which takes the form of informing legislators of his wishes and trying to get them ejected if they do not obey, or defended against their opponents if they do. Thus political demand (or effort or work) is closely akin to saving or investment. It involves the sacrifice of current consumption or leisure (or, if capital assets are disposed of to finance it, future consumption or leisure) in order to secure a further stream of advantages, or avoid their loss.

8. Consequently, in line with the assumptions made about savings behaviour, a poor man will choose to exert less political effort to achieve the passage of a law bringing him in \$1 a year than a richer man, though an exceedingly rich man (to whom \$1 a year is no object) may exert less again. Similarly with efforts to avoid losses. (This will be an extremely important proposition in the application of the general theory of politics to particular situations.)

9. However, no more in the political market than in any other does a purchaser normally have to pay the maximum he would be prepared to pay for a discrete lumpy object. Indeed it is one of the peculiar characteristics of the political market that if it be assumed (as here) that laws cost very little to produce, and that everyone, legislators and subjects, suppliers and demanders, have a very high degree of mutual knowledge and foresight, almost nothing has to be paid. A law will get passed the moment the net demand for it is positive, and this demand barely requires effortful expression. Legislators know how much effort those who want the law passed would be prepared to put into having them ejected if they did not pass it, and the amount opponents would put in to prevent their dismissal. Being very few, unable to put up a significant effort to keep themselves in office, but anxious to retain their jobs, they accordingly act as soon as a balance of demand is positive. They retain their jobs. Those who want the law get its whole advantage without actually exerting effort: it gives them political consumers' surplus. Those who objected get its disadvantages as a kind of political consumers' deficit, but put up with this fate since had they attempted to resist they would have been overborne and suffered both the law and the efforts to avoid it. In short there is, consistently with the almost nil cost of production an almost nil (net) demand price.

10. In the political market as a whole a momentary equilibrium exists when all laws for which there is a net positive demand are in force, and no others. A dynamic political equilibrium exists when all new laws are passed the moment the net demand for them becomes positive and any old law for which net demand becomes negative is immediately repealed. A stationary equilibrium exists when the same set of laws remains in net positive demand over time.

Much of this summary of the general theory of a 'pure' political market must, naturally, seem and be absurd as applied political science. Its quite blatant lack of realism derives, however, almost altogether from the assumption of perfect or near-perfect mutual knowledge and foresight in the agents in the market, an assumption used in the last chapter (and quite customary in

pure economic theory) which consistency requires us to carry over with the political-economic market we are now blending with the private economic market. The enormity of this assumption has already been noted in the private market context; it may be even more iniquitous in the political context, but it is certainly no less convenient there. In particular it has the happy effect of allowing us in this analysis (almost) completely to disregard what seems to be the chief interest of political scientists, the detailed process by which legislation is settled, and to concentrate on what is legitimately the economist's main interest, the economic content of that legislation when passed. What usually and of course legitimately concerns political scientists is the machinery for the expression of political demand and its translation into laws, that is the market research, the production process, the customs of the firm and the boardroom squabbles and amalgamations and takeovers of the political industry, its input side. These can virtually be abstracted from here where we are in search of rules governing the output, the very heterogeneous output, ever changing from time to time and place to place, of the industry: laws and the administrations politicians establish.

The retention of this assumption of near-perfect mutual knowledge and foresight here can also be excused on the grounds that by and large it is not, pragmatically, quite so absurd as it looks. Though most people spend some time and effort on politics, they usually spend much less than the economic importance of political decisions to them would lead one to expect: the political system cannot be so far from a dynamic equilibrium as at first sight one would imagine. Moreover when, occasionally, the political market is in a high state of excitement this is usually due in a quite obvious way to a failure of the signalling system: government does not recognise a clear balance of demand, or a minority refuses to know itself defeated. Nevertheless in the histories that follow we will occasionally soften the full rigour of this assumption, and suggest—rather than argue—that when this is done some recognisable features of the political life of the real world make their appearance on the stage of these miniature histories more or less (so to speak) of their own accord, without being dragged on. But this will be by way of asides to the main interest, the economic legislation that modifies the *laissez-faire* evolutions of the last chapter.

To keep the argument within bounds it is most necessary to postulate a limited array of all the laws, and of their accompanying administrations, which are to be admitted into our miniature histories. This array, in compliance with the assumed universality and permanence of knowledge, must be the same at all times and places, just as, in the last chapter, all the blueprints of all possible varieties of capital instrument were always available to everyone everywhere. Obviously the number of different laws which have actually existed is gigantic, if not quite so vast as the number of capital instruments, and for the purposes

of these miniature histories only a small selection of highly simplified examples can be allowed, examples which are, it is hoped, somehow typical and suggestive.

In constructing this it is helpful first briefly to examine a broad and summary classification of actual domestic laws.

(a) A first group can be made of the public interventions designed to protect the security of persons and property and to enforce private bargains freely entered into when they are threatened by violence, fraud and dishonesty: 'primitive' measures to enforce 'law and order' in the simple everyday sense of the phrase.

These have already been mentioned as, in this elementary model of political theory, the original *raison d'être* of the state. Little more need be said about them except to re-emphasise reasons why their existence, and a general respect for law and order, is consistent with the postulated selfishness and atomicity of Economic Man. That selfishness will easily explain a man's wish to have unfettered command over the fruits of his own labour and abstinence: but it will not directly explain his recognition and respect for other people's parallel rights. These require that he calculate that self-restraint is to his own advantage by eliciting or confirming calculations to the same effect by his normal neighbours, which result in much saving of time and effort in self-defence for all concerned and, as well, their willingness to share in repression of the abnormal persons who do not apply these restraints on interpersonal aggression. Such a calculation will be correct among persons in similar economic conditions—capable of devoting similar efforts to grabbing each others' goods. But it will not be correct, and on the assumptions of generally correct calculation will not be made, as between one group in one economic situation and another in a weaker one. Provided that the members of the stronger group—stronger in the sense of their greater capacity and willingness to exert effort in this direction—are correctly convinced that they are the stronger, and that their joint effort is to the profit of every one of them, they will join to exploit the weaker, and the weaker will put up with the results without resistance. Thus a state of *laissez-faire*, an absence of any laws except to protect property, is only to be expected when incomes are equal, or, if unequal, unequal in such a manner that potentially opposing groups of rich and poor are of equal political strength. When these conditions do not obtain some modification of *laissez-faire* is required for equilibrium.

A further point may be made in passing here. The assumption of atomistic behaviour would apparently imply, not merely a willingness to interfere with the property rights of weaker groups but also a willingness to kill them whenever a certain selfish economic advantage can be secured by so doing. The bloody implications for our miniature histories can be escaped, and a generally peaceful evolution inferred, by supposing that life is infinitely precious to normal Economic Men and that, since even the strongest can never

be quite certain that they will not be killed by a chance blow from the weaker defending their survival, killing is rationally ruled out. That would be a fully atomistic argument. Alternatively we could agree that in normal men selfishness never gets quite to the point of wholly discounting the right of survival even of those who stand in our way: a proposition which involves a very slight modification of the postulate of selfishness. The reader may take his choice: but these models of political evolution will be unashamedly peaceful except in so far as violence will occasionally be admitted as the consequence of miscalculations when the assumption of near-perfect mutual knowledge and foresight is temporarily relaxed.

Besides interventions to enforce simple law and order, economically relevant domestic legislation and its accompanying administrations can be classified into three groups.

(b) There is a large class of what might be called sophisticated interferences with the private market, such as measures to control money and banking, laws about inheritance, limited liability, monopoly, restrictive practices, the regulation of wages and labour mobility, trade unions and the like. They have the common characteristic of being (in most conditions at any rate) easily enforceable when the net demand for them is significant, and, hence, of not requiring any costly administration. But they vary from interventions very much akin to simple 'law and order' measures to measures that dominate the behaviour of major segments of the economy. Since our histories assume barter conditions and pure competition in private markets most of them cannot be brought in, but one, the control of labour mobility, is in some conditions so inevitable and so historically significant that it will be introduced in due course.

(c) Next there are transfers, unemployment pay, pensions, health insurance and the like. These, unlike the preceding categories, are of course enormously expensive in advanced societies. If we (as we shall) separate their enactment from their subsequent administration, and think of their financing as part of their administration (also provided for in their enactment) the most interesting thing about them is the redistribution of income from poor to rich—or vice versa—that may accompany them. The example of pensions will be taken in these miniature histories.

(d) Finally there is the huge and various class of productive activities conducted by the state, a class which, historically speaking, gets ever larger and more costly the more advanced the economy: transport, health services, education, research and the like. In the terms of the toy-like theory here being used these have to be thought of as administrations established by law and as including within their ambits the financial arrangements necessary to their conduct, the taxes, subsidies, tolls etc. required. These are notably awkward to introduce into our histories since our miniature economic men and our versions of the natural environment, our miniature geographies, have

excluded the wants from which the demand for them is directly or indirectly derived. These are also awkward to discuss at all precisely because their costs and benefits are not so neatly tied together as, in general, is the case with other types of production. (This is of course the principal reason why they come to fall within the range of public provision, and are abstracted from when the economist is concocting a model economy without a state.) Nevertheless they are so important that some typical examples have to be introduced into even the crudest miniature political economies, even though this can only be done in an exceedingly sketchy way.

The two brought in here will be transport and education.

- (i) The neglect of transport costs in the histories of the last chapter was an artificiality entirely traditional in economic theory. By implying that the economic activity of an economy could be discussed without reference to location, two dimensions present in every transaction—longitude and latitude—could be ignored, and the disturbing fact that, in general, incomes and prices will vary in these dimensions could be abstracted from. So long as we are dealing with small tribes, or even collections of small villages, which could tacitly be supposed each to cover only small areas and to be largely self-sufficient this simplification was harmless enough. But in advanced conditions it would only become permissible on the obviously intolerable assumptions that even most complex capitalised industries could be split into a host of minute localised enterprises and that all natural resources were evenly distributed. The former assumption is tacitly made indeed when economies of scale are abstracted from, but it need not be taken to that extreme for its primary purpose of allowing perfect competition to be served. And the latter assumption, perhaps not too silly if we are thinking of simple materials like wood for construction, clay for pots and so on, produces wild distortion when we get to coal and iron. Quite obviously an advanced economy has to have an advanced transport system. It is also, however, the case that even in a large agrarian economy without much capitalised manufactures, a transport network is also required, not merely to allow food to be moved when local harvests fail but for the administration of law and order. This will be dealt with in a little more detail later. The immediate point is that a model of political history as well as a meaningful model of the evolution of private markets demands the introduction of transport services, and the recognition of the problem of economic location however repellent the complexities that then have to be admitted. In what follows there will be no attempt to work out any detailed model of location or of local variations in costs and incomes—there are quite enough dimensions here already—but, in a very loose way indeed,

some political consequences of the fact that transport services have a significant role in political and economic evolution in even the crudest models of economic history will be mentioned.

- (ii) Education will be introduced as a second example of a 'product' that can be of major importance in public affairs. It can here be treated as a capital good literally embodied in the man who receives a course of education, and one the productivity of which resides in the added efficiency it gives him in certain employments. These will be taken to be the higher conduct of legislation and public administration, the management of large estates and highly capitalised business, and ordinary work with elaborate machinery in manufactures. The peculiarity of this capital good is that the investor who plants it in the brain of another human being acquires no authoritative control over its subsequent use and no authoritative claim to its remuneration. Profits on it stay with the man educated. (Slavery, an institution removing this peculiarity, is among the historical phenomena this model omits.)

Thus in the modified versions of the five miniature-histories to which we come in the next chapter there *may* be a state; this state, besides preserving law and order against the assaults of the unruly minority, *may* interfere in the private bargaining of the labour market; it *may* provide pensions from the taxes or other revenues it raises, and it *may* provide transport and education as well. We have to determine in what economic circumstances it does any or all of these things, how it finances them, and how their provision impinges on economic evolution. These possibilities have been reached by somewhat minor modifications to the assumptions of the previous chapter: some economic men are now allowed to have violent and disorderly tendencies; all are now allowed to use the compulsions of the state to better their own positions (when they can) and their technical knowledge (and geographical surroundings) now include the possibilities of administering legislation, taxation and transfers, and the provision of transport and education.

None of this yet allows for the introduction of international trade and international politics. Some further modifications will be required for this purpose but it will be convenient to bring them only when they are immediately needed, and they are therefore postponed until the last part of chapter 5.

5

Miniature Histories with Economic and Political Evolution

The 'purely economic' rules of behaviour set out in Chapter 2, and used in Chapter 3 to derive a set of 'purely economic' or *laissez-faire* histories have now been modified and extended to allow some politico-economic histories to be constructed, histories that are equally deterministic and mechanical but which, in so far as miniatures, even complex ones, can have that quality, should have a more realistic air about their movements.

It will be convenient to offer the revised versions of the earlier closed histories in a rather different order: E D C A and B. This will occupy Part A of what is unavoidably a very long discussion.

The remaining Part B will attempt some discussion of the consequences of insinuating international trade and international politics. The reader with a contemporary taste for rigorous model-building is fairly warned that the analysis, already by such standards deplorably loose in Chapter 3, and which is about to get looser yet in the closed politico-economic models, will then become looser yet again.

Part A

Closed Politico-Economic Histories

The rather stagnant world of primitive affluence, *Country E* can be quietly dismissed. No organised state is required at all, provided, at least, that the extent of its rich uniform soil is small enough for the final population not to be too large or too dispersed over large areas. Incomes never become very unequal even after rent has emerged. Even the wants of the landless are well satisfied, and everyone is leisured. Everyone has time to attend mass meetings to settle disputes, and (except for murder and such like deviant acts) not much will turn on such disputes as there are. Custom can be carried in the heads of

elders, and the situation does not change strongly enough for change in it to be necessary. Manufactures are minimal and can be produced anywhere—and land is uniform: though the community may have spread to become not one village but a number none of them has advantages of location or soil and their contacts are so close that none is allowed to fall under the sway of any unusually powerful bully and become a danger to its neighbours. Besides there is almost nothing to steal except food, and that is almost as much trouble to steal as to produce. This community remains very much an enlarged family, and, there being plenty of time for gossip, mutual knowledge will be at a high level.

In *Country D*, it will be remembered, land was of low quality and resources were such that after it had become scarce there were no means of saving it by the use of mechanical methods (or by irrigation) and there was equally no chance of mechanisation in manufactures. The *laissez-faire* evolution entailed the gradual decline of real wages as the intensity of land use increased and a rich landlord class gradually emerged, a final static equilibrium being attained when the peasantry were reduced to subsistence, and the landowners had become few and opulent enough not, on average, to decline further in numbers or increase their average holdings by the greedier buying the more extravagant irremediably out of landownership.

Here, on the revised assumption now made, before the scarcity of land has persisted for very long an organisation for the preservation of law and order becomes imperative. For this there are two immediate reasons. First it may reasonably be supposed that, compared with E, the population is spread more thinly in these early stages, though as in E we can assume that it spread itself out by setting new villages on unused land in the first place. Merely because villages are more thinly scattered and everyone here works longer hours general meetings to restrain the violent and settle disputes are harder to organise. Secondly, and far more importantly, the issues at stake in disputes about landownership are far more vital for the disputants than they were in E. Loss of land entails poverty for oneself and one's children, acquisition comforts and increasing income. The disorderly are tempted, and when a man dies childless cousins converge from all directions. A defined magistrature is soon needed, and it has to be equipped with force to back up its verdicts.

There is every reason why these magistrates should be locally appointed. Most disputes will be of a local character, especially since, villages being largely self-sufficient and there being little inter-local trade in the meagre manufactures produced, transport will be expensive, labour-mobility among the hard-pressed peasants limited, and marriage somewhat localised. Furthermore the most obvious candidates for appointment (however this is made) are the local landowners, who have more property to protect, more opportunities for leisure, who will have acquired experience in dealing with people in

contracting with their tenants, and who may have begun to invest in the education of themselves and their families. Moreover, in these early stages, they are not so outstandingly wealthy (or others so desperately poor) that, if they misbehave as magistrates, crowds cannot assemble to undo their injustices.

But from a local magistrature to a centralised state is a long step. Some collaboration between local justices is doubtless necessary very early because malefactors will flee, and property disputes may involve depositions from distant relatives. Also, though our assumptions exclude the possibility of long-standing local variations in inheritance laws—the whole mystery of primitive kinship systems having been silently abstracted from, if not ignored—whatever the original laws were they will have to be codified and unprecedented problems (bound to arise as tenancy spreads) will have to be solved in a consistent manner. We can get therefore readily enough to periodical assemblies of local magistrates with semi-judicial semi-legislative functions of a modest kind. If the economy we are supposing is geographically small, one such assembly is all that is needed to become the state, but if it be large (as is convenient to suppose) as yet we only reach an aggregation of counties without central control.

It is barely possible to deduce a peaceful evolution to a central government in the circumstances of this model, but within a range of violence permitted by the assumptions made one may be argued certainly to appear sooner or later. As time goes on two developments will occur. (a) Though the generality of the landless peasants have normal men's taste for law and order, peace and quiet, this is consistent with their being willing to cease paying the ever-increasing rents which are bringing them ever nearer the minimum subsistence level, by the brief investment of political effort involved in a *jacquerie*. We have, it is true, supposed that they would stop short of murder, but there is a minority which will not, and landowners will need to arm themselves (whether they do so with the blessing of the magistrates or not). (b) Among the dwindling number of increasingly wealthy landowners disputes about ownership and inheritance will become of ever more vital significance to the contestants, and these landowners are now employing hosts of servants who can be armed well beyond the level required for safety against sudden attack from tenants. Unless the magistrates can succeed in an arms race they will not be able to prevent the more predatory of their landowning colleagues seizing their neighbour's property with or without pretext. After all, failing an appropriate marriage with an heiress, or the availability of spendthrift landowners in the vicinity, the only method of acquiring larger estates is now conquest.

The preservation of internal order now requires the possibility of mustering large forces, and at least their occasional use far from their local bases. Plainly the richer a landowner the more quickly produced, as well as the larger, will be the force he can contribute, and there is certainly convenience in the

superior magistrature being supplied from such people. But then arises the ancient question: *quis custodiet?* If the magistrate be himself a large landowner he is unlikely to be impartial in causes affecting himself or his fellows: and a judge who was a mere paid official would be powerless to enforce his decisions. An oligarchy of large landowners might appear, collectively disciplining dissidents: but committees are not prompt to action. A monarchy, the wealthiest of all the landlords assuming a chief magistrature with the assent of all, and subjected to the need for consultation with them only when time permitted, would normally be more effective. Moreover the centralisation of litigation will provide the opportunity for a luxurious court, a social centre for the aristocracy at which an eye could be kept upon them. But again, *quis custodiet?* A kingship, however heavily surrounded with oaths to administer the law, requires of its possessor efficiency and virtue—or at least an ability to select efficient and virtuous servants, and whether it be hereditary or elective such persons are not always to be found, and even if found there can be no assurance that they will resist the temptations of their position.

Thus the concentration of landownership will eventually require a central government with substantial military power at its command, if not in the actual possession of the chief executive. Efficiency may suggest, though perhaps not demonstrate, that a monarchy peacefully established by the consensus of the landowners would be preferable to an oligarchy as the mode of organisation, and that it would come into being as soon as there are landowners so rich as to be able, if not unduly willing, to disturb good order far and wide. But it is not necessary to rely upon this high degree of practical wisdom and foresight among the landowners to conclude that monarchy is the likeliest regime. For an inefficient oligarchy will succumb to the assaults of the unruly whose leader will assume a throne to legitimise his position; and an inefficient monarch is likely likewise to have his throne seized by someone more competent in the conduct of force than himself. Political disequilibrium may start in monarchy or oligarchy, but is likely almost always to end in the former.

We are so far supposing that the emerging state is still concerned only with the codification, adaptation and administration of the *laissez-faire* conditions prevalent at the outset of this history: that its legislative actions, if any can be called such, are merely subordinate aspects of enforcement of the freedom to contract as they wish preferred by economic men in an egalitarian society. But this becomes plainly inconsistent with the rules of political behaviour of Economic Men provided in the last chapter. So soon as there is a landowning class with, collectively, the capacity to produce a political effort exceeding that which their tenants could produce in opposition it will seek to amend existing free-market practices to its advantage by the use of legislation.

Given the assumptions of uniform land, free mobility of labour, and supposing that the successive peasant farming techniques were so closely

packed together as to permit the use of marginalist phraseology, what has been happening so far to the tenants is that they have received the value of their marginal product as their wage, and this has been declining as the population per acre has increased (which it has done in a uniform fashion). No landlord has been able to offer less than the current marginal product because if he did labour would leave and spread itself around on other estates; and it would have been inconsistent with his rationality to offer more. However, if, by a general agreement among landlords it was decided that the mobility of labour should be limited, that tenant families should be tied to the estate on which they found themselves, they could in principle be compelled to accept a lower wage: they must have food. The possibility of such a law has, of course, been open to the landowners all along, but the resistance to its passage from the tenants should only have made its passage possible at a cost in violence (or preparations designed to prevent violence) which would have exceeded any benefit it brought the landlords. At some point, however, the increasing poverty of the tenantry, and the increasing wealth of the landlords causes the possibilities of resistance by the one class and the sacrifice of present welfare required from the other to ensure that it could be crushed if it were attempted, both to get less, and the measure becomes practicable. To begin with, the accompanying reduction of wages must not be too exasperatingly big, for that, of course, would increase resistance and the cost of forestalling it: but as time goes on, and the peasants weaken and the landowners get richer yet the screw can be turned tighter.

The central point of such legislation is the limitation of tenant mobility, and its administration will require punishment of those who flee, and those who harbour them. Enforcement will be to the general interest of landowning magistrates: retrieving fugitives from manufacturing towns will be more difficult. However, it will also be necessary, in the interests of law and order, to restrain the more grasping landlords who go too far in oppression: for they may provoke peasant rebellions that will spread. Wages need to be regulated (even if gradually regulated downwards) and this can take the form of legislative restrictions on the proportion of a tenant's crops the landlord can take, or the number of days' labour the tenant is compelled to give without pay on the landlord's home farm. The serf is by no means deprived of all legal protection.

It may be worth noticing, lest this argument seems strained, that the net result is equivalent to that which would have obtained had a monetary tax been placed on tenants and the proceeds been transferred as pensions to the landlords. That would be technically possible and, on our assumptions about political behaviour, politically inevitable if this society were fully monetised and the state under the control of wealthy landowners. (The proprieties could be preserved by the transfer taking the form of a highly regressive tax system the proceeds of which went to exceedingly well-paid honorific public posts,

with no noticeable work attached, for landowners and their families.) But the mode of exploitation here supposed adopted is the obvious one for a poor agrarian society in which most products are locally produced and consumed and which would not be highly monetised even if money were admitted in this miniature world.

Once this form of exploitative legislation has been introduced into the model it becomes possible to be more specific about the financial arrangements of administration of law and order than so far in this argument. It is now impracticable for peasant tenants to provide the funds or services needed by the administration: they have been reduced to extreme poverty, and are not, anyway, to be trusted with arms. Equally however the monarch, or any Executive Council of large landowners, will not willingly be provided with a standing army or police force large enough to be easily misused against the landowning class generally or the personal enemies of the executive: and since the services of such a force would not be in continual demand it would, furthermore, be an unnecessary expense. The ruler (or rulers) will be obliged to rely on undertakings from the landowners to produce forces when required. If this obligation is imposed approximately in proportion to their landholdings it will not be burdensome, and indeed will do little more than legitimise an expenditure they would be disposed to make themselves in their own self-defence. Thus a position is reached in which the landowners pay no regular taxation directly but secure their share of law and order by the provision, when intermittently necessary, of military services in kind to the ruler. As part of this duty one may reasonably include the maintenance of the roads through their estates along which forces assembled by the Crown would pass to repress rebels and enforce the judicial decisions of the ruler: for a road system will be a necessity for the maintenance of order when disorder may be created by wealthy well-armed landowners, or for that matter, by peasants provoked to local rebellions all too likely to be contagious.

No mention has been made so far of the economic and political roles of the handicraft manufacturers of this economy. In the first phases they are, it may be supposed, largely spread among the farming villages, though, if the resources required for some manufactures are localised and we allow some modest economies from propinquity among handicraft manufactures, specialised manufacturing villages or towns (and some pedlars to distribute their products) may be inferred. As time goes on village demands will decline, on a per capita basis, and the demands of the emerging landlord class increase. Part of this will take the form of personal services (which on the limited classification of consumption goods here used have to be treated as manufactures), but these we may expect to be provided from persons recruited from the class of serfs (who will come cheap) while, with equal plausibility, we may expect the handicraftsmen to congregate in towns away from the increasing tyranny of landlords, and, because they need no land, exempt from serfdom. It is

postulated that in this country there exists no possibility of mechanisation in manufactures, so that this source of urban wealth is excluded, but the richer and more parsimonious handicraftsmen may, and will, accumulate wealth in the form of housing. However, apart from this, wages in the towns will tend to be above the serf's level. (We may disregard the possibility that the town population expands too fast for the increasing demand of the landlords and the decreasing demand of the serfs for their products.) But the towns will be under threat from tolls levied on their food imports and their manufacturing exports by surrounding landlords if these be legally permitted. They will have a strong interest in having any such exaction banned, and the interests of their more distant clients will coincide with theirs. A strong central government can concede freedom of trade to them in return for taxation, all the more willingly in that it has, on the analysis so far, no regular source of funds. (Admittedly our model has no money, but the central administration will require regular supplies of manufactures, and can also demand the occasional provision of troops which will be easily and quickly providable from these concentrated populations.) In such a state there is, indeed, a strong congruity of interest between the monarch and the towns in ensuring a general tranquillity, most characteristically threatened by disorderly landowners; and the preference of the towns for a strong monarchy over an oligarchic rule may be added to the reasons for the probable emergence of the former. But since this state ends very poor its consumption of manufactures will not be large, therefore towns not large, and therefore their influence in the assurance of law and order not large either.

Thus Country D eventually emerges as a recognisably feudal state. Its politics are (by comparison with conditions which will be found in better endowed communities) notably legalistic. The only legislation that takes place in its history is the institution of serfdom: otherwise the state is occupied with the administration of its laws though, to this end, some road building occurs, and one might legitimately guess that some colleges are eventually found for the education of the state's and the landowner's clerks.

It is legalistic, but it is also litigious and unstable. Because the supreme, and almost only, source of great wealth is landownership wills are constantly disputed, and men who can afford private armies can feel or profess themselves unjustly treated by a judicature under the control of their fellows. Moreover any run of bad seasons will give the peasantry the choice of starvation or rebellion, and any weakness of the state's enforcement of an orderly treatment of serfs can equally provoke them to despairing violence. This economy can readily collapse into famine, plague and civil war, though unless its population be wholly wiped out it will return towards its ultimate, and still most unstable, equilibrium of affluence for a few landowners, poverty for serfs and a precarious comfort for some small towns of handicraft manufactures.

The apolitical *laissez-faire* history of *Country C* differed in several aspects from that of *D*. Because of the superiority of *C*'s land for peasants' food production and of its natural resources for handicraft and mechanised manufactures its population began better off, soon got itself better housed, and had started on the accumulation of manufacturing capital before, with the exhaustion of unused land, food prices began to rise and a landowning class began to appear. But then further increase in food production was dependent on labour-using investment in farming (irrigation, terracing, the drainage of swamps and the like) and mechanised manufactures began to fade as investment was concentrated on the land, not preventing but only moderating the increase in food prices. The final position was not unlike that of *D* in that a small class of landowners of great wealth lorded it over a large peasant population at subsistence level, spending their huge incomes on personal services and handicraft manufactures: but here the landowners were rather capitalists deriving profits from their irrigation works than mere owners of the rent of scarce land producing food by the application of current labour.

As in the case of *C* it is impossible to elicit a political history for this economy without some attention to special factors. Here as there some economic advantage may be allowed to manufactures being produced by handicraftsmen in close proximity to each other, and the assumption may be added that this applies equally to mechanised production. Hence the manufacturing sector (which will here start proportionately larger than in *C*) is early urbanised and as the economy spreads across the land new manufacturing centres develop, with local resource variations promoting a widespread network of trade.

Here the early magistrature can also be localised. But the cases to be settled will be more often connected with trade than in the parallel phase in *D*, and there will also be an earlier need to attend to roads, more, here, to ensure the economical movement of goods than, as it was there (and at a later stage), to move the forces of law and order. And since incomes here are not yet grossly unequal and none are yet very low, and since the improvement of transport is of universal interest (cheapening food in towns, and manufactures in the countryside) the levies required can be in approximate proportion to income.

In this economy when land becomes scarce and rent emerges in the countryside, there is a decay of manufactures as wages fall and investment is deflected to the development of farming: many of the new larger landowners coming, no doubt, from the capitalist manufacturing class which had begun to appear. *C* is then very much at the stage *D* was when the need for some central organisation of justice first became important, and as there the emergence of a feudal-type system can be inferred. However, here there are much stronger reasons why, if the economy is not to collapse, the central power should become of overwhelming strength.

By and large in the type of intensive peasant agriculture envisaged in *D*

disturbance in one area will not have much economic effect upon others nearby (even though peasant risings may spread when all are oppressed). Moreover bad harvests do not often come in clusters. But with a highly capitalised farming, in which the capital takes the form of water control there is a far greater geographical interdependence of production: a breaking of the dykes or a collapse of some part of a terracing system in one place can sweep away the capital of many others lower down the plain or valley, and the damage may take years to repair. Nor when per capita incomes are low are there years to spare from current production. This economy is far more vulnerable to the destruction of civil war and to the freaks of nature. Consequently even with larger landowner-capitalists no more or less inherently law-abiding than those of C, and no more or less farsighted, there will be a much greater incentive to have, and to pay for, a strong executive.

There are two possible other features of an agrarian society based on the control of water supplies which, though inconsistent with the simplifying assumptions made in Chapter 2 about other capital in these miniature worlds, may be introduced here without apology because investment in the manipulation of rivers is notably unlike other investments. (a) As the artificial use of water begins to cover a large proportion of the natural flow, its use in one place will begin to deny the possibility of its use elsewhere: the investor who extends his operations near the headwaters may destroy the usefulness of works lower down. (b) The optimal use of a water supply which has become scarce with the growth of population may involve gigantic works superseding earlier smaller-scale systems, driving canals across populous plains, drowning crowded valleys under new water-storage and so forth. Either geographical necessity will make a control and direction of new investment, and a central management of the whole system, imperative—if order is to be maintained and the works executed. What might fairly be regarded as a merger of the individual capitalist enterprises of the previously independent wealthy landlord-capitalists is economically to their advantage, and they can be more than adequately compensated from the increased profits-rent-cum-exploitative income of the new joint, the now plainly imperial, enterprise, of which they now become, in effect, branch managers or, maybe, pensioners. In D the interdependence of the large landowners lay in the common interest of the more law-abiding of them in the maintenance of law and order, and the enforcement of serfdom: here, to these interests is added that of co-operation in the integrated management of a production system which could readily break down if unskilfully conducted.

C's final state should in some ways be somewhat more stable than D's; because of the greater harm any disorder provoked by the nobility would do, more care will be taken to keep them in good behaviour. Moreover the closer economic integration of the agricultural sector will require a vast bureaucracy controlling the maintenance of the irrigation works, and the use of water, and

this will conveniently provide the magistrature. There will be palace revolutions rather than civil wars. On the other hand natural disasters will be more calamitous, and wandering bands of starving peasants from regions where the possibility of production has temporarily disappeared may create a multiplying havoc as they move to plunder still functioning regions.

Country A, the *laissez-faire* history taken as the standard in Chapter 3, had a more complex evolution than the others, and after moving towards the feudal and quasi-feudal conditions of D and C took a turn towards a recognisably capitalist state, ending in much the situation of B, a general affluence no other histories attained.

Because its early *laissez-faire* history was so like D's it is unnecessary to repeat the political amendments argued out above. Its story may be taken up when there is already a centralised feudal government in being, and a form of serfdom, still mild, has been instituted. It is mild since, though the landlords are collectively sufficiently strong to have somewhat limited the mobility of labour, the potential resistance of a peasantry still some way above subsistence (and thus capable of political effort) prevents the full severities later practicable in D. Moreover this being a richer economy than D the urban manufacturing population is proportionately larger, and it is more expensive and difficult to discover fugitives who flee to the towns for the free market wages there obtainable. Nor, as yet, has the competition for land among the landowners gone so far in the progressive extrusion of the more extravagant as to make average holdings very vast, and the landowning class numerically very small.

What now prevents the economic and legislative history of A following the course found in D is the possibility here of the industrialisation of manufactures, and, later, that of labour- and land-saving mechanisation in farming.

Mechanisation in manufactures, when financed from the incomes of parsimonious manufacturers, will (obviously) deflect them from investment in housing or land. As a new outlet for the savings of landowners it will have additional effects. They will be less eager to buy the estates of the more extravagant among their number, and less disposed to expand their castles, but those who are unruly as well as avaricious will now have another alternative to seizing the estates of neighbours and oppressing their tenants, both types of misbehaviour which entail an expensive (and risky) investment in armed retainers. Society becomes a little more peaceful, and the narrowing of the landowning class somewhat slowed down. Moreover the new profit incomes of the towns provide new taxable capacity for law enforcement and the construction of roads, which, as more manufactures have to be moved about, become a more necessary public service.

Even more significantly the fall in the prices of manufactures as the rate of profit declines will moderate, and perhaps even reverse, the decline in real

wages due to the still rising price of food. This will in turn moderate or even reverse the increasing severity of serfdom.

All these tendencies consequent upon the mechanisation of manufactures are under threat from population pressure, and (as it did in C) that industrialisation process itself will eventually fade out unless food production for the increasing population can be adequately increased. Here in A, however, the resources for manufacturing and the quality of the land are such that the mechanisation of agriculture with equipment that requires less labour and produces more food per acre proves the turning point.

An early consequence of this process will be cancellation of the single important legislative act of the feudal phase, the introduction of serfdom. As real wages increase the serf's capacity to rebel increases and with it the cost of maintaining their subjection (and when rents begin actually to fall that potential burden would be the more strongly felt). The towns are now growing and there is a demand for more labour: the urban rich are positively hostile to a law which lessens the supply, and would certainly object to being taxed to maintain it in force. Moreover the landlords themselves, since they are under legal obligation to keep their serfs alive, will find this an onerous duty when they have no profitable work for them. Naturally they will wish to continue to pay no more than serf-wages to the labour they continue to employ with the new techniques, but if it is a corollary of this that they must support the unemployed, they may prefer after all to pay free market wages and eject the now superfluous serfs into freedom, off their estates.

Thus this economy reverts to *laissez-faire*, with no legislation except a codification of rules for the orderly conduct of transactions, the protection of property and personal security and the construction and maintenance of transport, and with no administrations save for these purposes. (Being a closed economy there are no foreign wars to bother about.) These will not be very costly affairs, and the mode of their finance need not be discussed. It may, however, be noted that since the provision of military service to the Crown, previously appropriate when the threat was in civil broils created by exasperated peasantry or turbulent barons, would now be a notably inconvenient way of coping with fraud in urban business and such like things. Other means will have to be found. In a largely illiterate society detailed considerations of administrative practicability may be supposed to be unavoidably dominant in the choice of taxes, subject to the point that, with incomes still very unequal, it would be most surprising to find a tax system with a highly progressive incidence. The poor are still very poor (if not so poor as before) and the rich are getting very rich very fast (even though the great landlords are faced with falling rents). It is likely to be found that excises of a regressive kind will be concluded to be especially easily administered.

Such a meagre set of possible types of legislation has been postulated for this toy world that the later legislative history of A can be disposed of rapidly.

It will be remembered that in the stateless version of A in Chapter 3 after landownership ceases to be the prime source of great wealth its place is taken by fixed capital; that great inequality of income develops as the early generations of capitalists accumulate while the rate of profit is declining from its initial high level, but that, as the price of food and manufactures fall, and real wages rise, more and more enter the capitalist class. Furthermore the fall in the rate of profit moderates the inequality of incomes. Then population stabilises and finally accumulation ceases also: the history ending (if people persist in saving until the rate of profit is very low indeed) with a comparatively small dispersion of incomes and wealth reflecting less the distant fortunes of ancestors than the recent variations in individual parsimony. This tale has now to be corrected for the omission in Chapter 3 of that peculiar capital good, education. This has now been allowed into our toy world as a necessity for the management of large landed properties, capitalised business, and in the case of highly-equipped manufactures, normal subordinate labour.

In the feudal stage the large landowners will educate their heirs: it will be an investment necessary to the maintenance of their properties. Further they will do it at their own expense since *ex hypothesi* they cannot profitably squeeze their tenants any further than they are doing already. Equally in the earlier capitalist stage when the landowners are improving their estates with capital, and some industrialised manufactures are emerging, education will be supplied to the heirs of the owners of large firms, and young men of exceptional avarice, determined to acquire fortunes, will have to start by saving for their own education in the management of the capital they aspire to possess.

The major involvement of the state will only come later when those who demand education as a factor of production are no longer identified with those who provide the skills which constitute it as a factor, that is when the manufacturer or the large-scale farmer needs more educated skills than he can embody in himself and his children. He is then up against the difficulty in the free society we now have—it did not arise in Rome when he could educate his slaves and claim use of the skills given them—that if he invests in the education of some bright youth that youth could go off elsewhere and lose him the benefit of the investment. It is true that this would not be a problem if all the investors had very perfect mutual knowledge and foresight, for then they would collectively invest in just such a number of youths as were demanded, and if A got B's trained man and B A's neither A nor B would be the worse off (and the trained men would find that they could only secure the unskilled wage wherever they went). But there is an asymmetry here. No intelligent investor in education would educate more men than he wished to employ himself: he would then certainly lose his profits on some of his investment. On the other hand, if he invested less there would at least be a chance that he could attract somebody else's protégé for a wage no higher than the profits he had foregone on his investment. Hence the supply of trained men, on any reasonable guess

about mutual knowledge, will be too low, and investment in otherwise profitable advanced techniques will have to be given up: investors will have to go on to some other use of their savings, one not requiring skilled employees, and *ex hypothesi* bringing in a lower return.

Apprenticeship is only a partial remedy for this dilemma since, if it is not to be equivalent to slavery, it must be limited in time. The alternative available is the use of the state to provide a sufficient number of trained men, and for their supply to be financed by taxation. Even if this taxation be wholly imposed on potential employers of skilled labour it is a good investment. If enough skilled men are produced their wages will be no higher than those of unskilled men and the profits on their employment will rate as the profits on the forced 'loan' of the tax: and it will be a higher profit than could have been earned in any other way. (While it is to be noted that such provision would incidentally have to supply the whole market—and prevent any ambitious proletarian training himself at his own expense, since it would deny him a return on the investment—that would be harmless: he could always invest in something else.)

It would be silly to imagine, even in a miniature world, that the cost of taxation for this purpose could be nicely adjusted to its beneficiaries among the employing classes: requirements from industry to industry will be too varied and taxes are crude affairs, the ultimate incidence of which nobody need ever be supposed able exactly to understand even in imaginary worlds. Hence, we may suppose public education is always provided in not quite the required amounts and never increases quite so rapidly as ideally it should. This insufficiency and delay has a variety of consequences. It implies a dissatisfied potential demand for skilled men, and the plant they would use. And it implies that if some appear as a result of the self-education of the most provident wage-earners they will earn a rent (and thereby justify their own providence). Public investment in education will rather prevent this rent rising over time than actually diminish it. It will for that reason alone be the less attractive to wealthy taxpayers, but, by contrast, it will naturally be regarded with high favour by the families of the children who get scholarships, to whom it will appear as a sheer transfer. A class of well-paid skilled men is created at the main expense of the rich, what makes them well-paid being that they secure some of the profits on this state-organised investment by the rich. And all these well-paid men will start saving and accumulating earlier than they would have done otherwise, though, since all but those who have not got accumulated savings are poor, that may not mean much as yet.

The next legislation that is produced, and the last allowed for in this toy, consists of transfers. In the phase now reached legislation and public finance are not seriously redistributive as compared with the *laissez-faire* possibility. The feudal legislation redistributing income from poor to rich has faded away, and public education is being financed, roughly, by its main beneficiaries, the

demanders of skilled labour, though some of the benefit has been allowed to slop over the men whom they have educated. There is no redistribution from poor to rich because the poor collectively have the power to resist, and none from the rich to the poor because the latter's power to demand it, though rising, is being outstripped by the power of the increasingly wealthy capitalists to resist it. But this balance will shift. As real wages increase the lower income groups will be increasingly able to invest in political effort. The rich, it is true, will be getting richer, though the fall in the rate of profit will be meaning that their incomes are rising less fast than their capital stocks, and the poor will collectively be catching up. Moreover the marginal utility of the incomes of the most opulent will be getting so low that they will be less disposed than before to resist taxation. (Had charitable impulses, a non-atomistic interdependence of utilities, been admitted into the assumptions the rich might be held eventually to welcome the state as a convenient agent of their benevolence.) Thus the time will become ripe for the poor to use the law to extract some income from the rich, and for the rich to accept the necessity for the transfer in the interests of preserving their remainder; or, if you wish to put it that way, of preserving that state of law and order that resistance would unavailingly breach.

Pensions have been taken as the most plausible example of a transfer since in any poor society the sufferings of old age seem to be those against which advance preparation seems most difficult to make when the state does not intervene. Logically, maybe, a general cash transfer to the politically active would be more to be expected, but it does not require much titivation of the assumptions made to suppose that the rich will be less reluctant to concede and the poor not much less anxious to obtain a transfer to the needy aged. It is a less obvious assault on property relations, and even the politically active poor will be relieved of some of the burden of their aged relatives (and know that some day they will age themselves). Suppose therefore that these transfers start as relief to the most miserable of the poor at the expense of the most opulent of the rich, and that, as time goes on, the provision is further extended, rather faster than the average level of income rises, so that the dispersion of incomes already closing or due to close by the decline of the rate of profit is somewhat accelerated.

Where will it end? There is a little difficulty here if the assumptions of atomistic and farsighted behaviour are taken too literally. For then it might be supposed that the spoliation of the rich would eventually become complete—or at least that a flat equality would eventually be enforced when the lower income groups have collectively the power to achieve it. But even without introducing any major interdependence of utility (in the form here of sympathy for the powerless plutocrats) this need not be so if an assumption less damaging to the plausibility of our miniature world is admitted. Let it be agreed that even in this world there are accidents of all kinds and that any man

may have some sneaking hope that one will enrich him a bit and a fear that one might impoverish him. Then, given the political assumption that laws are general measures, he will, for quite selfish reasons, not want the incomes of those somewhat but only somewhat greater than his own assaulted: and not be displeased when those a little below his are helped. Pragmatically, but not psychologically, he will have some political sympathy with people in a band of income around his own. If so, we start with the very poor demanding help from the very rich, and as both get richer getting it in increasing measure, with the middle classes indifferent but holding the ring. But as the gap narrows the possibilities of further transfers dwindle, and the final state is one with all incomes within an acceptable band. This will be a state of affairs with some inequality of net incomes (and before tax maybe a great deal more), and maybe, if the rate of profit is very small when growth ceases, with great inequalities of capital—a situation quietly accepted by everyone; a placid welfare state.

In recounting this history constitutional issues have been neglected, i.e. the internal organisation of the political industry. Indeed, as has been pointed out, taken to their extreme, the assumptions made would allow the industry to have no inputs, to be costless. Before going on to the final closed history, Country B, a little common sense about practical politics may be let in.

1. In early village times, the signalling system is simply the *haro* of the victim. The courts and legislature are his neighbours then assembled.
2. Later these simplicities fall into desuetude, and political decisions concentrate within an ever-decreasing group of ever more highly-armed landowners, geographically dispersed most of the time. Whether the central authority be a monarch with advisers and a staff to maintain written records, or an oligarchy with such a staff, some form of periodically assembled council is essential at which the big men communicate between themselves on current disputes, and some form of bureaucracy noting and disseminating their decisions and commands. And whether it be arranged formally (which is convenient once the formality is established) or informally (which can become formal by habit) in these councils the weight attached to differing views must effectively be in rough proportion to the wealth behind them. This measures the potentiality of force, and in this exploitative society, force will be ready for action. Miscalculation will here normally lead to physical violence, and once that starts almost anything may happen in the accidents of military strife.
3. In the next phase when land-holding is less tightly bound up with the extraction of high rents, and more with the administration of capital, and when the growing urban wealth of manufacturing capitalists is calling for more say in public finance from the new rich, there is a larger group including new men of power which needs to influence, in a controlling fashion, the decisions of the executive if disorder is not to be brewed. And the more formal and habitual, indeed the more equilibrated, the industry in the preceding

phase, the more awkward may this transition be. But if this be managed efficiently the new legislature will be more a Parliament than a Council, but still one not representing the poor.

4. In the later evolution of this history ever more people have the resources for political effort, and there gradually appears (to reach a climax when transfers are effectively demanded) a situation in which the lower income group will, if their demands and their power are not recognised in time, be the active disturbers of the equilibrium. The mechanics of the signalling apparatus has to be continually adapted to channel their demands into the regular apparatus of legislation: the franchise must be extended, and end universal.

These, very generally expressed, seem to be the stages through which the consultative and legislative arrangements of this history would have to evolve if it were to remain in the dynamic near-equilibrium that intelligent (but not omniscient) economic men of the kind postulated would seek. If men were indeed omniscient they could of course simply leave it to a philosopher-king to promulgate laws and save them the trouble of signalling their wishes at all. If, at the other extreme, they were so stupid as never to know what others felt about their wishes, they would all have to spend a great deal of time and effort, often nugatory, finding this out, and in the process might wreck the good order necessary to the progress of the private market.

Country B was from beginning to end the most prosperous of the five economies distinguished in Chapter 3, an economy where man found himself with splendid resources for every possible use, and in which the initial agrarian phase—with a rich handicraft agriculture, plenty of handicraft manufactures and busy house-building—quickly evolved into an industrialised state with manufacturing and farming both highly mechanised, without the appearance of land-scarcity.

It need scarcely be argued that no trace of feudalism shows itself here, and that road-building and education are earlier and larger requirements than in *Country A*. It is also clear that no regressive pattern of taxation is ever practicable, even though there is quickly a rich class: the poor, not being as poor as they ever were in *A*, could successfully resist such a proposal. But taxation can be, for a period, more proportional than progressive since everyone has an interest in expenditure and until the rich become very rich indeed—beyond the horizon (here a further one) of the reasonable aspiration of most voters—no one desires to despoil them. However then, on the assumptions made, there will be pensions and redistribution: and that implies progression.

Thus *B*'s legislative history is that of *A* in its post-feudal evolution, but accelerated. As these are models of history, and not of prophecy, we did not peer closely at the final stationary state of *A*, and need not do so for *B* either. But it may be worth noticing that in an economy as opulently endowed with

natural resources as B things might go differently at the very end. Country A might finish with a state in which, though real wages (accompanied by well-spread property incomes) were high enough to inhibit the growth of population, people were still obliged, to get such incomes, to work longer hours than they would for pleasure, and in which the provision of pensions, the maintenance of education and roads implied real sacrifices to those being taxed for their finance (though sacrifices willingly made). But in B conceivably they might attain that state of economic bliss in which those who worked (and worked no longer than they enjoyed doing so) produced so much that (after taking all they wanted for their own present and future use) there was ample output over for the aged, the improvident and even, had this personal difference been admitted, the lazy too. Then in principle all the legislation hitherto in force (except that authorising the restraint of a disorderly minority after due process) could be dismantled. Children would be taught for the fun of it by people who taught for the same reason; roads would be maintained as a healthy exercise; the aged would feed and clothe themselves to the limit of their needs from surplus stores. This of course depends very much on the assumption, built into these versions of Economic Man, of the satiability of wants. If this assumption be accepted the time will come in B when most people are able and willing to educate their own children, and support their own aged relatives in comfort, and when most public services will be sufficiently financed by those who chiefly benefit and can conveniently pay. The economy could revert to *laissez-faire*. But one imagines that there being no particular advantage in this change to most people, the facts that a few people with a large number of children, and a few ancients with no relatives alive, would object would be sufficient to maintain the system which earlier brought much greater gains to some and imposed much greater losses on others than *laissez-faire* then did.¹ Indeed there is a possibility that legislation might move in the opposite direction. If any economy is near to the point of economic bliss entrepreneurs in the private market will not much care whether they are making profits more or less than normal and labour will not bother to move between occupations for small differences in earnings: not much departure from the assumptions of mobility and rationality will be required to reveal the possibility of inefficiency when efficiency is no longer very rewarding. Hence it is not inconceivable that voters might be content to allow the state to take over the private market, provided it was then administered in accordance with the one-man one-vote democratic principles which the economically near-egalitarian conditions would make appropriate (and the state's administrators

¹ To my mind the propositions that economic wants are satiable, and that reasonable men enjoy a certain amount of work are very plausible, and equally the proposition that some economies might nearly approach a state of economic bliss. But this model is too crude to bring out the interesting questions that arise as the situation tends to that climax.

were up to their job). Thus, in effect, anything from *laissez-faire* to democratic communism is almost equally possible at this ultimate stage. This need not surprise us. The significant point is that, for some time before that point, *laissez-faire* would be inconsistent with a rational use of their political power by the lower income groups, and an egalitarian communism would be successfully opposed by the intelligent rich. It is only when conditions converge upon economic equality that the choice between regimes turns not on the balance of political power but upon nice judgments of the relative technical incompetence of private and public agencies at an agreed task.

The input side of this economy's political industry raises no points of much interest so long as we are postulating something very near political equilibrium. It starts with village meetings. It quickly acquires a central government as population grows and a somewhat progressive tax-system is used to finance public transport developments and education: a road network cannot be efficiently planned at village level, and the rich will not be evenly spread among the towns and cities that emerge. The conduct of public business will require representative institutions. These, however, will be based upon universal suffrage, since the rich who appear never have such predominant power that they could disfranchise the poor. If by some miscalculation they sought to do so and succeeded they would find themselves tempted to impose regressive taxation to finance the public services that primarily benefit themselves, and the consequent uproar would persuade all concerned to revert to a signalling system more consonant with the distribution of political power. With a proportional or somewhat progressive tax system, even though the majority of voters are poor, the rich can, however, be left in dominant control of the legislature and executive, spending mostly their own classes' money, mostly for their own classes' benefit, the majority of the electorate being content to let them carry on while they themselves carry on with their private activities. Nor would a maintenance of universal suffrage entail, in an intelligent community, much risk of a premature introduction of transfers. Doubtless the poorest of the poor would agitate for them sooner than the rich would be at all prepared to concede them, but it would not be until the poor generally could make large political efforts to this end and the rich and those hoping to be rich have become less willing to make large efforts to prevent its realisation that, even with universal suffrage, the concession will be made. Thus this economy has a good chance of evolving peacefully with a democratic political machine from beginning to end: it does not need as A did to discard its primitive democracy for feudalism and then work back by necessarily gradual stages to universal suffrage. In considering the politics of A the more miscalculations we allow men to make in their political behaviour the more likely it is that feudalism emerges from blood-letting, and continues in it, and the more likely that, having extricated itself, it has in later times a series of clashes and calamities as dominant minorities no longer dominant fail to

adapt the formalities of politics to the realities of power. The chances of mischief are less here. But these, naturally, are propositions that could not be adequately argued, without much more precise definition of assumptions about the practicalities of political communication and the types of error and misunderstanding we allow in our economic men: what has just been said is merely suggestive.

Part B

International Politics and Trade

The politico-economic evolutions sketched in the last few pages were for closed economies. Isolation is, of course, only one of the many ferocious simplifications which collectively demand that these histories should properly be called toys rather than dignified with the pretentious titles of models or general theories. But it is a particularly damaging one in the context of an argument designed to suggest the explanatory strength of the concept of Economic Man as a universal and constant model. International trade and politics have been such gigantic factors in economic evolution that unless they can be somehow brought recognisably into this model world without serious detriment to the essential characteristics of the basic model of normal individual behaviour being assumed that model may still be of altogether too partial relevance. It is not enough to drag only domestic politics in. Nevertheless the added complications which arise when two or more miniature histories are allowed to interact with each other make the task of introducing international trade and politics far from easy and the remainder of this chapter will be even more assertive and unrigorous than anything that has gone before.

Several of the assumptions made about the geography of our miniature world require to be modified before the attempt can be made:

1. In each of the isolated economies land, though limited in extent, was supposed uniform in quality. In order now not to have too absurd an image of a natural frontier between communities it is convenient now to permit some variation in its quality, not so much that the immediate emergence of rent altogether upsets the histories so far worked out, but sufficient to get each community started in the best favoured areas and spreading outwards as population grows.
2. Mountains and coastlines may be introduced *ad lib*.
3. Natural resources other than land have been supposed unlimited and of constantly equal accessibility in each closed community. This confined rent to agricultural land and made it permissible to ignore the commodity composition of 'manufactures' in them. But in an open world it might all too frequently lead to the oddity of complete specialisation and it therefore is useful quietly to allow for some decreasing returns in, e.g. the extraction of

metals, only to become quantitatively significant when the total demand becomes very large—as, with world trade, it eventually may.

4. A little more precision has to be given to the specification of the transport costs that had to be introduced to make sense of domestic evolution. It may be assumed that unless and until the carriage of goods and the movement of men is mechanised their movement over great distances is exceedingly costly, but that with successive mechanisation it becomes ever cheaper.

Next, assumptions must be made about the transactions permitted between members of different communities:

5. All the transactions that may take place between private individuals within a particular community may also go on between individuals across frontiers, unless interfered with by governments.

6. Governments, acting (as in domestic politics) in the interests of those with the preponderance of domestic power, may operate upon foreigners in two principal ways: (i) they may impose import or export duties on private trade at any level politically advantageous to their supporters; and (ii) they may assume political control over part or all of another state's territories, then imposing what laws they wish upon the conquered territory. Both types of action will be taken, as with domestic legislation, under the sanction of the threat of force.

7. These adjustments still leave international trade and politics to be conducted by the rational well-informed self-regarding uniform Economic Men who produced the earlier histories. But just as it was necessary, and apparently sufficient, in order that a reasonably realistic-looking amount of political noise and disturbance might appear within closed political histories, to allow men to be less than perfectly informed about the legislative ambitions and political power of all their neighbours, so here too it is imperative to allow some ignorance of foreigners' political strength and intentions. There would not, otherwise, be any wars unless (one wishes, absurdly) we postulated xenophobia and a positive pleasure in killing foreigners. Some occasional miscalculations, leading to wars, and thence to some long-lasting degree of fear and suspicion of foreigners, greater than normally felt towards opposing domestic political groups, will be enough.

With these preparations some conclusions may be drawn, first about contacts between poor unindustrialised economies, then about those between rich and poor economies, and finally about those between rich economies. The argument will concentrate upon political relations: the background of private trade cannot of course, be ignored but can largely be taken as read.

Suppose a continent of static or expanding peasant economies, each as yet with no capital but housing, and no scarcity of land, each in its own incompletely-filled territory of nearly uniform land, each without defined national frontiers, and without a well-formed central state, with (at most)

meetings between village elders to sort out disputes between peasants from neighbouring villages.

Supposing, in line with the initial geographical assumptions, that these communities have land and natural resources of different quality, there are three ways in which they may come into contact. Because of their varying natural resources they may trade manufactures with each other. Or the more disorderly and adventurous of the poorer communities may make pillaging expeditions on the outskirts of the richer. Or thirdly some of the increasing population of the poorer territories, rather than settle on the unattractive periphery of their own communities, may quietly attempt to move further on to the unused better lands of a better endowed neighbouring community. In the second case, and in the third also (if, at any rate, the members of the richer community have got to the point of realising that they themselves will need these empty areas at a future time already foreseeable) communal action on the part of this richer community will be called for to repel these interferences. Even though no organised state may yet have emerged among those more prosperous peasants for the protection of their own property against their own deviants, one will be created to deal with their disturbing foreigners. It may be inferred that, provided the richer community be not too small, its government will be able to establish, maybe after skirmishes but perhaps by peaceful (though force-backed) negotiation, a defined frontier within which any foreigner not coming for trade or friendly sociability will be liable to maltreatment. Some pattern of territories is sorted out, as among birds. But these of course are the mere beginnings of political contact.

Suppose next that there comes into existence a community with good but limited land centrally placed among other smaller communities with somewhat poorer but less limited land, and that in this central community land, with the increase of population, becomes scarce with, in consequence, the appearance of a wealthy landlord class in effective control of an organised state. Suppose further that the natural resources of this territory are not such that industrial or agricultural investment quickly become profitable. Then the stage is set for investment in territorial expansion. The rich landlords would wish to acquire neighbouring lands to till with erstwhile citizens of neighbouring states reduced to servitude, or simply to import those citizens as slaves. Such a conquest would necessarily involve some investment in transport organisation and police, but it is one of the absurdities of the assumption of perfect mutual knowledge that, were we to make it, that might be the only investment required—recognising the potentially greater military strength of the central community the weaker groups at the periphery would surrender without mounting a vain defence. The conquest would then be unambiguously dated at the first moment when the two conditions of superior potential strength and willingness to incur the takeover investment are both satisfied for the first time. However, with a modest degree of mutual misunderstanding

some actual investment in military effort will be required. An over-optimistic aggressor or an unlucky one may try too soon, and get defeated; an over-optimistic and lucky defender may not finally be overwhelmed until the aggressor's full strength is deployed at a date long after he would, if perfectly informed, have given up. Both the date and the amount of warfare (and consequently the return on the investment in conquest) become uncertain, but unless we admit a great deal of luck in war we could still, if we specified more details than seems here necessary, at least predict a period within which the conquest will occur and a maximum amount of conflict (and hence a minimum return on the investment).

It is worth noticing that if the geographical and demographic features are convenient, expansion by conquest can be seen to be, so to speak, a substitute for the 'feudal' exploitation of the domestic population. Before the large land holdings have swallowed up the bulk of the smaller, and before there is a mass of politically powerless landless labourers ripe for reduction to serfdom, conquest can provide an alternative source of land. Small landholders can join with the rich in the expeditions required—and cease to be small-holders in consequence.

It is easy to see that each successful conquest makes the next easier. Being much enriched by their successful investments the ruling groups of the conquering country can the more readily undertake further operations so soon as the gestation-period of organising the victims of the first is completed. There is here an accumulation process in which land, tribute, and slaves are accumulated instead of machines to save land and labour. But it may come up against one or other of several limits:

- (a) An empire may reach geographical obstacles which sharply increase the cost of further extension.
- (b) It may reach the frontiers of another state of around equal strength. (This raises questions which will need separate discussion.)
- (c) In the course of conquest natural resources may be acquired which were previously impossible of exploitation by reason of inadequate transport or security in trading, and which are such that the return on other types of investment rises to pass that from further territorial expansion.
- (d) Though this presupposes a level of miscalculation on the part of rulers perhaps scarcely consistent with the attempt to keep our Politico-Economic Men from being ignorant and stupid, the problems of command and communications in a large Empire may tempt dissident armies to conclude that the best opportunities of enriching themselves lie in seizing domestic control rather than in fighting on distant frontiers. (The legions may march on Rome.)

This crude account of the formation of a territorially large agrarian state by

conquest rests upon the geographical assumption of a centrally-placed and relatively well-endowed community whose neighbours are sufficiently poorer, and have sufficient geographical obstacles to effective alliance, for resistance to fail. They are not very fanciful or onerous assumptions to make. But it becomes harder to produce a more or less determinate history of events when two land-hungry states of about equal potential are found adjacent to each other. Wise leaders assessing the possible outcomes of wars hypothetically to be started at any date in the future might agree that on average the returns on the investment might be nil (most attacks ending in stalemates, and the rest equally likely to have positive or negative returns), and hence that a perpetual peace treaty was preferable. But when perfect wisdom is not assumed and when, in any case, wise leaders do not have to take irrevocable decisions about the future—they can keep options open—it would seem likely that both would have to maintain forces either for attack or defence and that mutually unprofitable wars would flare up at intervals until, if ever, chance gave one or the other a decisive victory. This, however, presupposes that in neither are other types of investment very profitable. When they are the two groups of rulers have a mutual interest in peace except on the much rarer occasions when one or other believes that the balance of potential military power has, for some reason, shifted largely to its advantage.

Where there are not two but several land-hungry states of equal strength to deal with, the situation becomes more complicated yet because the problem of alliances enters and with it calculations about the next stage when a successful alliance has overwhelmed its opponents. The tendency, it is suggested, will be for there either to be two firm alliances of about equal strength liable to burst into wars, retrospectively agreed to have been wasteful, or for a single hegemony to be established by stages.

The last two paragraphs have, however, dealt with what are perhaps to be treated as special cases and periods: geography and demography will not typically give rise to many occasions when there are collocations of states which are (a) of nearly equal strength, and (b) hungry for land and slaves in the absence of other investment opportunities, and when this does arise relative potentials are unlikely often to remain equal for long. They are the analytically awkward (and historically messy) phases that may occur in the process of the formation of large states from the scatter of small pre-industrial communities which has been taken as the starting point.

This argument has abstracted altogether from the ordinary private trade that would take place between the citizens of these unindustrialised communities if their resources endowments were sufficiently diverse. Even assuming transport costs extremely high, and transport itself extremely slow, there will be scope for direct barter between neighbouring territories from the beginning, especially in small objects hard to damage, and there can equally be barter conducted in successive stages over great distances. Two features of such

private trade may attract political interest. Trade routes, especially if passing through territories in which trade does not take place, will require protection from predatory interventions, public or private, along the line. Further, if the poor suppliers of some traded good supplied under conditions of increasing cost to a wealthy state are beginning to earn comfortable rents from their ownership of an increasing scarce resource, they become a natural objective for conquest, and dispossession.

Advanced or advancing economies, and backward economies, stagnant or retrogressive, can each be of many kinds quite consistently with their populations all being uniform Economic Men. In consequence there may be many diverse situations in which trading contact is first made. Three illustrations may be given of contact between geographically remote pairs of economies made possible when accumulation in the advanced country has allowed ocean-going shipping to be constructed.

1. Some traders who are reasonably well-informed or who have merely guessed luckily come to an economy which has reached its final feudal equilibrium: a monarch and his nobles, or an oligarchy of landowners, living in the completest possible luxury on rents from a peasantry at subsistence level, with a handicraft manufacturing sector to supply them with every kind of sumptuous consumer good—a situation of doubtful political stability, as we have seen, but currently in a state of political equilibrium. The visitors find relative prices quite different from those at home and are anxious to trade. The rulers, whose material wants are satiated, have no motive to trade, and a rational political motive in preventing any of their subjects enriching themselves in a manner that would endanger the regime. Trade is forbidden, so long as the foreigners cannot enforce it. But if it were profitable enough, and if the trading interest were in control of the home government and could if necessary finance a military expedition (equipped with weapons of a kind more efficient than anything available in the backward country) they might be in a position to insist.

There might then be a break-up of the structure of landownership in the backward country, and if trade introduced capital goods in the production of which the advanced country had great comparative advantages (imports of machinery being offered at prices impossible for local production), an industrialisation process both in manufactures and farming might be initiated in the backward country. In effect the foreign contact might, at the cost of some major disturbance to its politico-economic equilibrium, convert it from being at the final stage of the closed history C into something akin to the middle stage of history A.

2. Or take next a situation in which traders arrive in a region which contains a congeries of disorderly feudal states among whom equilibrium has not been attained, or at least has never lasted long, and suppose, as in the last case, that

these states have no armaments or trained soldiers that can in any way face up to those available from the trading nation. The local princelings will then find that the import of armed mercenaries is extremely profitable to themselves, and they may have ample local products—stores of local precious stones perhaps—with which to pay such mercenaries very handsomely.

It is difficult in such circumstances to see why the advanced country should not extend this profitable investment to the point of total conquest, including in this conception the expropriation of the feudal landlords and the acquisition of their rents for the conquerors' benefit. This indeed might happen: the Spaniards took over the Inca empire at a moment of internal disunity and eventually expropriated the existing landowners. But scale-factors may enter. If the feudal states available for conquest be very large, as was eighteenth-century India, and the advanced trading nation very small, as was eighteenth-century Britain, the investment necessary to take the whole territory over, and to oust wealthy princes equipped with large though inefficient armies (and disposed to retain their rents) might be beyond the advanced nation's capacity to spare resources from current use. Representatives of its mercenaries might assume the direction of the administrative duties of the local landlords, and might even award themselves or their own government the trappings of formal sovereignty, but they would do so on the basis of administering the erstwhile feudal chaos in the interests of those local landlords. This may not be difficult if, with the restoration of good order, their incomes are so huge as to satisfy all their wants. But if, as in the previous case, normal trade in now peaceable conditions provokes an industrialisation process, such an externally-manned government, if it is to maintain itself in power, will have to have the same careful eye to a shifting balance of political power as any domestic government would require in these circumstances. And like that government it will be overthrown if it fails too grossly.

3. Citizens of an advanced economy may well wish to invest in mines, plantations etc., in a primitive economy half a world away, where there are natural resources not available nearer home and which are most cheaply developed with the use of techniques requiring machinery and educated labour not locally available. If there be no local government yet developed to the point of being able to maintain the security of the opulent strangers who will arrive (or to maintain the security of existing residents against the attacks of delinquents among these strangers) it is clear that, in practice, a government will need to be established by the newcomers. Moreover to the extent that the costs of this government may much exceed anything that the indigenous population will willingly pay, they will have to be met from the revenues of the foreign investment, which will, if the investors have been farsighted, be prospectively large enough to meet this burden. Thus this would become a colony mildly governed by the imperial power, but probably governed in a manner inattentive to indigenous interests.

The contacts just traced out between geographically distant 'advanced' and 'primitive' economies, of which the real-world analogues are obvious enough, depended for their rather dramatic political consequences on the economic factor of accumulation in the advanced country making it possible for there to be a somewhat sudden and forceful collision between economies which had hitherto been quite separate for many generations. It is significantly hard to imagine situations in which an advanced and a primitive economy could long exist side by side and thus with, at least around their peripheries, easy opportunity for trade and political relations, not to mention migration. A small population with rich resources of every kind starting an accumulation before land was scarce would be conquered and colonised by, or for its own security have to conquer and absorb or extinguish overcrowded neighbours with universally inferior resources. Any complementarity of resources in a region of much natural diversity would lead to so much trade and investment across the whole area that economic conditions would converge. The assumptions made about economic behaviour exclude local patriotisms, language differences and barriers of race and culture which would account for pockets of highly disparate economic conditions near each other.

Consider next the mutual relations of a group of large nations each of which, like countries A and B, has entered some way upon the phase of industrialisation. They are escaping from, or have never experienced, a 'feudal' episode of domination by land-scarcity. Suppose them contiguous or with transport costs being so reduced by mechanisation that a massive volume of trade will come into existence unless the governments obstruct it.

1. Given the nature of the Economic Men of which these states are composed, the possibility of war between them should now be largely excluded. Each may have scarce natural resources yielding large rents to their possessors and coveted by the others. They may have their rivalries about the conquests they are making, in one guise or another, of the backward countries elsewhere in the world. But with the expensive and destructive armaments now practicable, and the impossibility of predicting the outcome of armed conflict, wars are now gigantic investments and their probable return on any rational calculation far less than that in the many other channels now open for investment. Thus at this point and at least in this respect our miniature world loses contact with reality. It has no place for Napoleon or Bismarck or Kaiser William II or Hitler or the political views of those who permitted and followed these monsters of folly and vice, and overrode the Cobdens, Brights and Paretos whose anti-militaristic views would, on the assumptions made, have predominated.

2. But a rational avoidance of war between such states does not preclude the less drastic political intervention in the international relations of their citizens that are constituted by tariffs, and we may end this little sketch of the

international economics of Economic Man by teasing out some deductions about tariff policy in the situation postulated.

There is no section of orthodox international trade theory (which almost invariably assumes populations of Economic Men) which has been more thoroughly, indeed more obsessively, investigated than protection. But, sadly, much of this literature is not so helpful in the present context as one might hope. It is mostly static, and, worse, it generally assumes, having strongly normative preconceptions, that each state is devoted to the 'national objective' of maximising its income, or, yet more romantically, will agree to such a policy as will maximise world income. Here we are concerned with dynamic matters, and in our world of miniature Economic Men there are no such things as 'national objectives'. Here tariffs are imposed in the interests of those with preponderant power and not for the benefit of the whole population of the state imposing them, still less of the world at large. Nevertheless some suggestions can be made. They will be strengthened, but do not depend upon it, if it be agreed that in this intricate area of policy-making the conflicting interest groups are less than as wholly efficient as their members are in their private affairs: more short-sighted, more concerned with direct effects than indirect, and with concentrated than dispersed.

At the beginning of the phase being examined agriculture is everywhere the main employer and, through rents, the main source of high incomes. The landlord interest is the major political force but there is a growing industrial-capitalist interest, and a trading interest of merchants long engaged in the overseas exchange of hitherto not-bulky commodities. There is little international trade in food except for short distances at the periphery. Some historical inheritance of excise and customs duties, imposed because of their superior administrative simplicity in largely illiterate communities may be assumed.

The *laissez-faire* evolution will be easily seen. Given some diversity of resources and of qualities of land, rising populations and capital accumulation there would be a great growth of trade, specialisation of production and capital flows. But in countries where this evolution is destructive of the rents of the landlords it will be resisted by the imposition of tariffs or other controls on food imports the more successfully because wage earners are politically unimportant and effects on the growth of manufactured exports (the complement of the 'natural' increase of food imports) are indirect.

Plainly the most elaborate specifications would be needed to predict the further evolution, but there is one possibility which has a suggestive air about it. As population rises and food becomes dearer and the domestic market for manufacturers is ever more plainly hampered by the landlords' intervention the combined opposition of wage earners (who are collectively powerful through sheer numbers) and the industrial interests compels a move towards free trade. This in turn becomes cumulative as real wages rise, the industrial

interest becomes stronger and the landlord class accepts impoverishment by cheap food imports. Indeed the emerging dominance of the industrial capitalists presented with a 'natural' opportunity of taking over the manufacturing sectors of the other countries specialising upon the export of food may be expected to make free trade the policy the state seeks to impose upon others as sound doctrine.

Free trade becomes, eventually, the appropriate policy for an affluent democratic state (one without great disparities of income and wealth) provided it is not the possessor of a natural resource vital to exports in peculiarly inelastic overseas demand. The proviso is important since such a state would intelligently restrict its output and tax the monopoly profits thus secured, perhaps by an export tax. However there must not be too many such resources dispersed in the group of countries concerned for that is a game all could play, and if played in alliances much of the same incoherent indeterminacy might emerge as would emerge in a feudal state. In parallel fashion experience might teach the wisdom of some superior control—and the difficulty of making it work. It is easier to proclaim a Common Market than to secure adherence to its rules.

This part ends with a short recapitulation of its intention, and a provisional judgment.

The aim has been to 'test'—if in so thoroughly speculative a way that the term merits its inverted commas—the strength of Economic Man when this is judged his capacity to generate plausible-looking deductions about economic events. Pushing the claims that might be made for him to the limit we have explored deductions covering the longest conceivable periods, the largest space, and further extended the events deduced from the main trends of purely economic aggregates to political evolutions relevant to them. Further we have used a version of Economic Man which is constant and universal not only in the qualities of being selfish, rational and well-informed but also, subject to the influence of climate, possessing the same wants and abilities at all times and places.

To make such a variety of long deductions we have had to use a miniature Economic Man with highly simplified wants and abilities and compare him, rather quietly, only with very simplified pictures of history. As such he seems to work well, establishing some presumption that a more elaborate set of wants and abilities (controlled by the same selfish and high intelligence) would work as well with a more elaborate picture of history.

Throughout it must be remembered that our Economic Man is merely model, not a description, and would remain so when given a fuller content. Consequently there has not been, and cannot be, any pretence that he explains all economic events. The most that can be claimed is that, as a model, he works rather well in the sense that not very much is conspicuously left out of

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the main qualitative trends of history that he cannot explain (in a qualitative way). There have been, it is true, no booms and slumps, and in politics wars and revolutions would (had we not made a few relaxations here and there) have been absent too.

All in all, therefore, judged by the Objective/Deductive test we may conclude, it is suggested, that Economic Man is a strong model.

Part II
The Weaknesses
of Economic Man

The general plan and intention of this part were briefly indicated in Chapter 1, but since they entail an abrupt change of manner there is some need to restate them more fully before the detailed analysis is started.

The only objective of Parts I and II is to arrive at a conclusion about the adequacy of the traditional account of individual economic behaviour, that model which presents it as selfish, rational and well-informed and to which the old-fashioned name of Economic Man has been here restored. The argument of Part I has suggested that this model may work well in explaining much politico-economic evolution in the sense of the main outlines of the histories of outputs, prices, incomes over long periods of time and in many places, and, in addition, much institutional change. So far so good.

But, as the reader has been duly warned, the view is taken here that a model must meet other requirements besides that of successfully predicting or explaining objective market events of these kinds. These events are the voluntary acts of the individuals who consciously decide to perform them, and the model, in general terms but in such a way that the generalities can be replaced by particularities for particular predictions, provides an account of how these decisions are thought out. Such an account can be a wholly artificial construction of the investigator's imagination, a fairy tale, an 'as if' invention, or it can be a true account of what in fact passes through the minds of the agents to whose affairs the model is applied. Here it is supposed that for the model to be a good one it must be of the latter kind. It may be abstract in the sense of omitting, for simplicity of generalisation and application, some features of the decision-making process that are of only occasional or minor importance, but what is included must be a valid description of what is left. In addition not so many or important abstractions must be made that it becomes impossible to make, by good judgment or supplementary enquiry, some

identification of the failure of the model's prediction to fit the facts. Nor must there be so many as to leave the investigator with a reasonable suspicion that even a good fit may be merely accidental.

A separate requirement here also assumed is that what the model predicts must be not only the objective act of purchase or sale but the conscious experience associated with it. Since economic acts are performed with a purpose in mind which, almost always, directly or indirectly, consists in attaining desired experience—an image of that experience being a crucial element in the decision-making process—this extension of the range of *explicitanda* is not so sweeping as may appear at first sight. It does little more than say that it is within the field of economics to consider whether expectations are satisfied.

While these are undoubtedly very severe demands to make in a discussion of Economic Man, the brief survey of the history of the concept which will be made in Chapter 11 suggests that, at least until the time of Pareto, no major economist would have considered them excessive. It is only in quite recent years that, with the rise of mathematical theory and econometrics, they have become somewhat old-fashioned. The traditional view is adhered to here partly because I see no reason to deny economists a continuing positive interest in economic psychology, and partly because, without such an interest, their ability to enter at all far into normative discussions is substantially destroyed, a point to which we shall return in Part III. Once this view is taken, however, it becomes necessary to scrutinise Economic Man not only, as in Part I, for his capacity to predict acts but also for his psychological realism. It is to that task that the next four chapters are devoted.

One major difficulty facing this enterprise derives from the long and exclusive hold over our imaginations that Economic Man has exercised, as the only coherent and systematic account of economic behaviour that we possess. It is simply impossible to discuss whether or not he is the best model without alternatives with which to compare him.

Another is that when we learn about Economic Man we usually do so in a specialised language derived from the generalised mathematical presentation of his modes of decision-making: he is all utility maximisation, preference orderings and so forth, certainly not the language in which we conduct our daily lives. Little single purchases or sales may be translated into the everyday language of a careful housewife illustratively while we are being drilled in the specialised language, but we are not given the far more elaborate sequences of thought she must go through while she maintains her family in general equilibrium over years and years. An incidental consequence of this is that we do not direct our minds to what she may be thinking when she is *not* thinking in a rational maximising well-informed manner, and do not therefore consider what aspects of her economic behaviour our account abstracts from.

To meet these difficulties here there seems nothing for it but to concoct a set of terms and definitions to describe private economic decision-making of all sane kinds. We need a terminology by the use of which we can stretch our stiff imaginations to provide us with alternative accounts of economic behaviour, a language which will describe a range of the humanly possible. This will be attempted in Chapter 8. (The loosening-up of mind is quite as painful as the loosening-up of body, especially when the operation is performed quickly, and this chapter is likely to be as much the most strenuous of all in this essay to read as it was the hardest to write.)

In Chapter 9 the language newly provided is used to compose four specimen pictures of patterns of adult economic behaviour of very different kinds, and they are described not simply as examples of the theoretically possible, but as models of realities that may have often occurred when the circumstances were favourable. One is an Economic Man but three are not.

The discussion of these two chapters contains frequent reminders of the altogether evident fact that economic behaviour changes both from generation to generation and during the adult lives of individuals, not merely in what they do but also in the ways they decide to do it. The assumption of consistently rational and well-informed decision-making by the Economic Men in Part I, maintained throughout the adult lives of each, and from father to son over centuries, may have yielded curiously persuasive stories about some aspects of history, but even the economist most faithful to Economic Man would grant that applied in detail (and consciously as a model and not a description) the importance of the abstractions made would change from time to time and place to place. This is not an essay about economic history but emphasis was put in the introduction upon the length of time that any useful economic theory must be prepared to cover. A model may be excellent for explaining some momentary situation, 'now' or the next quarter or the next year, but it will become inefficient for any argument covering more time if it abstracts from the temporal evolution of methods and content of decision-making—assumes them constant—when in fact they are changing significantly. Economic Man is in fact a model that thus abstracts; the great majority of the theoretical arguments using him are momentary arguments or deal with stationary states (an almost timeless world) or with comparative statics (a timeless world). The importance of this abstraction can only be guessed at (at any rate in a speculative discussion) by thinking about the kinds of change from year to year and generation to generation that may take place. Moreover since the economist, like any other social scientist, longs to think of the topics he discusses as succeeding each other in a determinate way, he must seek rules even for the determination of changes in the momentarily commanding rules of decision-making. It is also well to remind ourselves (lest Part I has encouraged a moment of forgetfulness) that most economists, all historians and all sociologists and some geneticists too, will agree that modes of economic

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behaviour do in fact evolve over time, and that bold theorising about the sequences that have been exhibited in the last three thousand years or so has not been disdained by wise men.

In Chapter 9 these questions are briefly reviewed. It would perhaps be sufficient for the main aims of the argument to consider only changes during adult life and from generation to generation, but the temptation is not resisted also to venture, with barely disguised scepticism, into the lofty problems of secular evolution, and to note why the suggestion of secular excellence made for Economic Man in Part I is, after all, somewhat delusive, even by the test there applied.

Finally in Chapter 10 we shall come, after these lengthy preparations, to a verdict on Economic Man.

Throughout this part the discussion will be confined to 'purely' economic behaviour. Nothing more will be said about political activities.

Economic Behaviour: Concepts and Limits

The purpose of this chapter is to provide a framework of concepts within which a generalised description of every sane kind of economic thinking by private individuals could be fitted. We are only concerned with this framework: where within it real people have actually congregated or congregate today are matters for later speculation.

We are concerned with economic behaviour only. The distinction between the 'economic' and the 'non-economic' has been variously defined and that made here will be considered on p. 90, but for the present 'economic' may be vaguely taken to cover production, exchange and consumption in the ordinary (vague) way, both the acts to which the behaviourist confines his attention, and the conscious thoughts and emotions which surround those acts. It is the latter that particularly need a good deal of dissection here. If we are to avoid the strait-jacket of Benthamite utility maximisation (into which only some conscious behaviour fits comfortably) some everyday words will need to be put to special uses.

The streams of economic consciousness that we have to analyse (and which we have, of course, to assume ascertainable, describable and communicable) can be separated into two principal parts: that devoted to decision-making, and that accompanying and following the act decided. Broadly, the first is expectation-forming and act-choosing, and the latter consists of the consequentially realised experience. It is logical therefore to start with splitting hairs about the first.

Decision-making takes time and is spread intermittently over time, with more subsequent time devoted to the acts decided and to psychological consequences of them which will often be spread intermittently over much more time yet. But the human mind, in economics as elsewhere, finds the

continuity of time almost intolerably awkward to handle. We need a unit of time, not infinitesimal, within which we do not bother about the moment to moment succession of events and within which many events may occur. As in Part I we may call this a 'year' and we, as it were, clump together all the thoughts and emotions that go to decision-making in it. To do this it is highly convenient quite artificially to disregard any learning and forgetting within the unit that would otherwise introduce inconsistencies and suppose them pushed off into the next unit. It is then, it is hoped, permissible to call this aggregation of the flow within the unit a 'stock of knowledge': it is what the purposive, and even the barely purposive, agent brings to the determination of his subsequently realised economic experience. Metaphorically, it is the 'capital' from which the 'income' of experience flows and its size, efficiency and accumulation will (under other names) concern us greatly.

The atoms of consciousness, the ultimate particles of economic psychology, heaped up in this stock can be classified under six headings.

1. *Primary Knowledge*, or in a general sense motives, wants, attitudes, 'springs of action'. All the images of prospective emotion, pleasures, pains, reliefs from pain involved in economic actions, high, low, sensual, moral, self-regarding, other-regarding, referring to the present or the future. We will have to make some discriminations later.
2. *Secondary Knowledge or Identifications*. The relationships between items of primary knowledge and acts that are expected to realise these emotions in subsequent experience. (E.g. relief from thirst is an item of primary knowledge, the thought that a glass of water will achieve it is one of secondary.) Metaphorically it is technical knowledge of an expected relationship between an emotion and an act, not so much springs as channels to action, necessary to prevent the flow wasting itself.
3. *Market Knowledge*. Beliefs or expectations about the prices now or later of goods and assets and potential work being considered for purchase or sale now or in the future.
4. *Technical Knowledge*. Beliefs about the physical output consequent upon the combination of particular bundles of inputs.
5. *Environmental Knowledge*. Beliefs about facts relevant to economic decisions that are, proximately, regarded as non-economic—expectations about length of life, health, matrimony and parenthood, the state of the law, climate etc.
6. *Comparative Knowledge*. The kind of knowledge which consists of assessments of the relative attractions to the agent of the expected outcomes of alternative actions or sets of actions. Actively it is calculation, passively the possession of a conscious preference-ordering.

Three characteristics of items in these stocks and of these stocks individually and collectively will especially concern us: their *accuracy*, their *completeness*, and their *constancy* or stability over a succession of time units. Each of these

terms is slippery in a psychological context and the senses in which they are used here need definition.

(a) All 'economic knowledge' as the phrase is used here consists of expectations and, broadly, it will be called *accurate* if these expectations are satisfied.

However, even in relatively simple cases, those of market, technical and environmental knowledge where the expectation is about an objective quantity, a number, we have to reckon with the facts that almost all expectations will be either, to some extent or other, probabilistic (surrounded by a probability distribution more or less rationally defensible) or uncertain (the agent recognising that the outcome will be within wide limits but not pretending to assign relative probabilities within those limits). Accuracy is a quality that cannot be ascribed (or denied) to expectations in the case of uncertain decisions. But in the case of probable knowledge an outcome could be called accurate if it is within the range around the most probable value that includes some arbitrarily chosen but high proportion of the whole distribution. (Persons who, over a series of actions, encounter an abnormal number of outcomes on the favourable side of the relevant distributions may be called pessimists: and optimists conversely. Well-informed persons, with respect to these actions, are as often pleurably as unpleurably surprised, but not often either.)

The concept of accuracy presents further definitional problems in decisions where an element in or the whole of the expected outcome is some emotional, subjective experience, a pleasure or a pain—that is an item of primary knowledge. In every case obviously the expectation can at best only have the kind of relationship to the reality that a black and white photograph has to its subject. Furthermore in many cases, where the decision is to undergo an experience of great complexity, such as reading *War and Peace* for the first time, or to train as a doctor, the expectation must be in somewhat vague general terms without ceasing to be liable to be pronounced retrospectively to have been inaccurate. Again some kind of distinction can be drawn between expectations which are limited to the somewhat immediate consequences of the act (say) the experience of first reading *War and Peace*, and the remoter consequences (say) later recollections of it and the prospect of developing a life-time addiction to great literature, a taste with far-ramifying consequences. Expectations can be accurate not only 'so far as they go' in respect of immediate consequences, but 'all the way' covering the remoter ones too.

Further complications about defining 'accuracy' (parallel to others yet to be encountered with defining 'completeness') arise when the term is to be applied to decisions involving 'moral' and 'unselfish' motives. They can only be sorted out by simultaneously defining 'moral' and 'selfish' in the senses in which they will be used here.

A 'moral' motive will be said to exist when the qualities of 'good' or 'bad'

are believed to be attached to a potential act or its consequences, and these qualities are more than just pleasant useful, unpleasant useless etc. but, rather, attached by some metaphysical authority. The authorities usually recognised can be classified as God (the supernatural), Conscience (an inner voice not quite like the rest of one) or Society ('The Party', 'King and Country' or some other human group which does *not* have an individual representative to whom one can refer for authoritative interpretation). The collection of moral qualities attached to potential economic acts will be called a moral code. The 'nil code' that does not recognise the existence of any acts to which such qualities are attached is amoral. We need not pretend here to know what the right code is, but a particular decision will be held 'accurate' if, when the act has been performed the agent sees no reason to feel that his expectation that it possessed a particular moral quality was incorrect.

A man may be said to be *absolutely selfish in an amoral way* if the fact that an economic act he is considering will have consequences (pleasant or unpleasant) to the experience of one or more other person in no way enters his motives for doing it or not doing it; and *absolutely selfish in a moral way* if he has a code that requires him (as it were) to cancel from his appraisals any force that his recognition of such consequences might have in his decision-making. These are extremes since it is virtually universal that men at least have some natural regard for the members of their nuclear family and a friend or so. Hence they may, more frequently, be described as just *selfish*, amorally or morally, if they have no regard, influential in their decision-making, for persons outside this restricted circle. They have *social* motivations, moral or amoral, if they do. (Naturally this definition of selfish in no way prevents them being described by those who find the word worth using, as 'socialised' in the sense of taking part in the market system which is a 'social' organisation, or in the sense of accepting much of the knowledge they possess from other people with or without modifications by later private mental effort. A community of selfish men, such as were the Economic Men of Part I is a society of socialised beings—and there is no ban on sociologists joining it.) In relation to motives towards acts involving other persons, both within the 'selfish' circle and without, accuracy has to be interpreted in the same rather relaxed way as with complex final acts of purely private reference.

Another requirement for accuracy arises in the case of comparative knowledge. When a man chooses to do A rather than B, for the choice to have been accurate it is surely not sufficient that the expected outcome of A was realised. It is also required that had he chosen B its outcome, even if it would not have been just as expected, would at least not have been such as he would have preferred to A. Otherwise even in ordinary parlance we would have to label the choice inaccurate. For this requirement to be found to be fulfilled it will again be often necessary to suppose the observer to have access to a

Highly Informed Expert who knows what the man would have experienced had he chosen otherwise.

(b) We need some kind of concept for the *completeness* of economic knowledge as a standard of reference, making such sense as we can of the idea of a man who has the maximum capacity to realise his full economic potential in any given circumstances. It is distinctly elusive.

It can refer only to accurate knowledge: a complete encyclopaedia of errors could be embodied in no human mind. Of accurate knowledge it need only include that *relevant* to the agent. A man with \$1000 a year and no prospect of any more need not know how he would spend \$100,000. Furthermore in a population in which there is much specialisation, some parts of the total stock of economic knowledge that we are trying to define can be, as it were, shared out: the man who knows all about the technique of managing a bank does not need to know all about breaking horses, provided that he knew enough of the emotional lives peculiar to the two professions to have chosen accurately between them before training.

Subject to these restrictions it does not seem unimaginable that men might be such that it can be said meaningfully of them that they possess complete stocks of market, technical and environmental knowledge. Other puzzles have to be cut through in thinking of completeness in connection with the other three categories.

Comparative knowledge by definition includes the appraisal of alternatives, and some will be rejected. It seems rather silly to say of a man who anxiously considers 1000 alternatives before choosing the best that he has more complete knowledge than the man who only considers 100 but also chooses the best. Yet the man who goes without thinking to what knowledgeable observers would agree to be the best decision is a freak who is scarcely to be described as knowing very much. The range of relevant knowledge around the best decision has to be very arbitrarily imagined. ('Best' must here signify 'most efficient' given his moral code since complete knowledge must be held not to require the solution of the problem of which of all possible codes is the moral optimum.)

Completeness for primary and secondary knowledge is best considered together. The existence of wants and of means to their satisfaction are barely separable: the point made, as I interpret him, in Marshall's remarks about activities creating wants rather than wants activities.¹

The problem is whether we can conceive of any upper limit to the list of economic wants which human beings with the highest intelligence of which, as human beings, they are theoretically capable would seek to satisfy in any of the physical and social environments we have to consider. Granting that all these wants are implanted in bodies which exist for only limited periods of time and have fairly definite limits to their physical capabilities, and that the

¹ Marshall, *Principles of Economics*, Book III, ch. II.

satisfaction of wants always takes time and usually absorbs energy, conventional statements about the infinity of wants may be treated as often merely rhetorical. But certainly an indefinitely huge number could be listed if, for example, instead of counting listening to music as one we listed every note of every composition which the music lover heard as separately wanted. There must be some limit to the minutiae of any description.

Given some grouping of minutiae under single terms it will be assumed here that some limited list of purely private and amoral wants and attitudes could in principle be constructed for persons with the humanly conceivable maximum of primary and secondary knowledge. Furthermore it will be supposed that, subject to much interpersonal variation in the intensity of emotions, this list will be the same for the bulk of the human race. Whether this concept is applicable in practice, and whether real people ever attain this completeness are different questions not for discussion here (and awaiting resounding negatives later).

A complete knowledge of all possible moral codes, and within comparative knowledge knowledge of any eternal right ordering of them, may quickly be proclaimed beyond the wit of man, and especially of students of the potentialities of economic behaviour. The economist must simply take them to be what they are and have been, even if he may allow himself sometimes to speculate upon their evolution and its determinants.

Similarly a complete knowledge of alternative sets of social references, alternative ranges of emotion about the economic affairs of persons outside the nuclear family and a handful of friends (limited to their grandchildren temporally) must be excluded from the definition of an amoral man with complete primary and secondary knowledge. It will here be assumed that only moral codes extend these limits. (Besides, professions of love or hate for large segments of the human race, present and to come, usually find such effective expression as they receive in the arena of politics rather than in personal economic action.)

(c) Stocks of knowledge have been defined as the aggregated flow of thoughts and emotions within a unit of time. It is obviously important in any classification of economic behaviour to be used in an economics which goes beyond simple momentary situations to have some regard for change in them over the agents' lifetime.

Though infants, it would seem, start with only few primary wants (of the greatest intensity), few identifications and not much else, the economist is concerned with adult agents in whom the learning process is far advanced. It is useful to have a term for the state of a man whose knowledge changes as little as possible from one unit to the next, a man who neither learns nor forgets. Knowledge will here be called *constant* if the only changes are those humanly inevitable. These seem to be changes in the intensity of present wants due to the ageing process, matrimony, parenthood etc. and similar changes in

technical ability. Apart from these there must of course be an accumulation of memories (which need only be treated as changes in knowledge if they are relevant to later decisions) and revelations of the outcomes of probabilistic decisions.

Two classifications of economic acts may next be distinguished.

1. Economic acts may be *final*, requiring no further act by the agent to complete their intended contribution to the agent's experience, or they may be *instrumental*, requiring some other act or acts for that purpose. Most acts of consumption will be of the first kind, most of production and exchange of the latter. By and large instrumental acts will be those concerned with the business part of life, that in which money is the most familiar unit and its quantity a prime criterion, while final acts will be those in which pleasures and pains of infinitely heterogeneous kinds are principally involved, satisfactions of primary knowledge which may (or may not) be reducible to units of utility by the student of other people's behaviour or even by the agent himself if he be sufficiently steeped in utilitarianism.

It is awkward that there is a large class of actions that are partly instrumental, partly final. Many enjoy work as well as needing the pay. A few may sit through several performances of the *Ring of the Nibelungs* in the hope of discovering what it can possibly be that others enjoy in final fashion in this seemingly interminable row. For some purposes the dominant characteristic can be safely treated as constituting an adequate mode of distinction but for others the existence of mixed types has to be remembered.

A further nuisance is that when any means/end distinction is made we come upon the inveterate human characteristic of seeking to justify every end (not only the self-evidently vicious and crude ones but also simply pleasant ones) as a means to some higher end until some Ultimate End is asserted. However, if we remember that we are considering a descriptive classification of decision-making behaviour in a rather humble part of life it is probably safe to assert that normal people at any rate stop quickly along this succession and can apply the distinction to their *ex ante* thinking without much hawing about.

2. A separate four-fold distinction may be made between acts which are *habitual*, *impulsive*, *exploratory* and *calculated*. All four terms require definition for the senses in which they will be used here.

An *habitual* act is one that is taken at more or less regular intervals or when some particular circumstance arises, without consideration of alternatives. In deciding upon it comparative knowledge is absent. To give the term a reasonably wide coverage it is useful to permit it to include some comparisons of acts of the same kind: for example I habitually go to the cinema on Saturday nights without imagining any other way of spending that evening, but I do think which of the four cinemas open has the film I am likely to prefer;

or I always buy a book when I pass a bookshop but I choose between those on offer.

An *impulsive* act is one also taken without consideration of alternatives but differs from habitual acts in not being taken in any regular way. A motive bubbles up, is identified with some act and performed.

An *exploratory* act is one that is deliberate but of which the outcome is believed by the agent to be uncertain in the sense that he does not have in mind when he considers it any probability distribution of possible outcomes. A sub-category within this one may be called *experimental* actions when they are partly taken with the intention of accumulating evidence for framing such a probability distribution for future use.

A *calculated* act is one made after comparison with one or more alternatives and after attaching a probability distribution to the possible outcomes of all the acts considered. A set of calculated acts, not necessarily all in one year or taken in successive years may be called a plan, and plainly the extent and 'location' of plans in the list of economic acts performed in a lifetime will be important in the description of types of economic behaviour.

Concepts such as those just hewn out (with all too blunt an axe) are of value in serious studies only if they are applicable, if the smallest fragments of economic acts and experience in which we interest ourselves and of which we have a sufficient variety can be described in terms of them, and generalisations derived. How far these or some of them meet this requirement will be discussed in Chapter 10. For the present it is merely assumed for argument's sake that they are at least usable at the level of general speculation, and that by manipulating varying assemblages of them and supposing them applied to the various types of knowledge we can imagine different types of behaviour. The range of the objectively possible is doubtless ultimately limited by physiological factors underlying both consciousness and the physical acts which we believe we perform voluntarily, but of this range the economist or any other social scientist can pretend to no more than the haziest ideas: but at the level of imaginative generalisations (subsequently in principle to be subject to empirical testing) he can devise limiting types that seem humanly possible recognising that they may never be realised or realisable. A pair of such limiting types will be briefly described in the two following sections, representing in some sense the minimum and the maximum stocks of knowledge normally endowed men could be supposed to possess, an Ultra-Stupid and a Near-Omniscient Economic Man. But before reaching them something must be said about the distinction between the 'economic' and the 'non-economic'.

Such a line is obviously necessary if the contemplation of economic affairs is not to splay out into a study of all human affairs. There will have to be some account in Chapter 11 of the history of the concept of Economic Man—if only

to show that no one has seriously pushed it to the limit of Near-Omniscient Man—and in this it will be seen that the position of this line is much at issue.

Historically one line of argument leads to the inclusion in 'economic' of every type of decision that could be attempted in a rational maximising way. This is much too wide for use here. (What does it exclude?) Equally a definition in terms of transactions normally involving the use of money in a market is too wide since in advanced economies some expenditure is called for in virtually every activity. The simplest procedure seems to be to remove from the field of attention, by simple rough enumeration, a list of the major human activities that (a) on a broad view of civilised history directly involve only very small proportions of the expenditure of normal individuals, and (b) are only rarely brought, alongside simple everyday material needs, into regular rational calculations. Thus politics, religion, sleep, loafing about, idle play, and sex will here be taken as 'non-economic' activities, but the 'economic' will be supposed to extend much beyond the acquisition of basic economic necessities well into cultural, educational, and sporting activities of the more purposive kinds. This is quite arbitrary and so vague that a detached empirical study would find much still to allocate but it seems sufficient for present purposes. Any narrow definition confining economics to simple necessities makes the subject uninteresting outside poor countries, and one confined to money-making, and excluding final experience, makes it fit only for the City Pages.

The introduction of this distinction inevitably creates another variable in the classification of types of economic behaviour. Imagine two communities with similar natural resources, similar technical knowledge about economic production, similar economic tastes, and even making similar moral valuations about the relative importance of different economic activities. But one does not, like the other, have a religion which prescribes numerous festivals, to be spent listening to sermons, nor do its inhabitants like those of the other, happen to enjoy sitting in gardens embroidering upon traditional legends. Plainly these non-economic differences will have large consequences to their respective economic affairs. Reference to them will be needed to explain the very different economic experience of the two communities.

If we accept the assumption of a broad degree of uniformity of potential in normally endowed mortals and the notions of the accuracy and completeness of economic knowledge (moral codes apart) differences in economic behaviour can only be traced back to differences in morals and economic and non-economic knowledge. It is thus tempting to think of a Super-Omniscient Man, with his complete and accurate non-economic as well as economic knowledge and his particular moral code as a standard of reference and to define 'economic bias' or 'non-economic bias' as the qualities of the behaviour of those who in a given situation would give more or less time and energy to economic action and experience than would this ideal monster. But this is plainly impracticable. The alternative used here is to imagine a standard

purporting to represent relationships between the hours devoted to work and economic consumption of average mortals at different levels of real income and to use this to define the biases we are after. If in concocting it some rough and ready empirical studies were used it would not be an entirely arbitrary construction, and explanation of divergences from it in terms of obvious non-economic factors might suggest themselves. Nevertheless it is emphatically a very arbitrary concept.

The *Ultra-Stupid Man*'s decisions are almost all and wholly habitual. From the moment he enters the labour force he pursues the same annual round of production and consumption, only slightly modified as he ages by family responsibilities and by the rise and decay of his physique. He sells the same kind of labour every year until retirement, he buys the same kinds of consumption goods and saves and dissaves merely as a residual. To make him imaginable it has to be conceded to him that if the same goods are available at two prices in the market he traditionally frequents, he will buy them at the lower, and that if two prices are offered for what he sells in it he will take the higher. But he does not think of buying or selling other goods.

He is exceedingly ignorant, knowing of not much more than the simplest material necessities of survival and comfort.

His expectations are accurate so far as they go, which may not be very far, and his habits may have the most unpleasant remote and long-term consequences which he does not recognise as such. (In a round of such repetitivity it can scarcely be imagined that he is ever much surprised by immediate consequences.)

He could be specified as complying with any of many moral codes that do *not* attach virtue to, and arouse lively self-satisfaction about, economic planning and novelty. But the conditions for his existence would be the more easily fulfilled if his code required mutual support in a group larger than the nuclear family, if it positively reprobated novelty, and demanded time-consuming religious or political observances.

The *Ultra-Stupid Man* experiences no adult learning: and if a man of this kind finds that his environment has suddenly so changed as to make his adherence to custom physically impossible, he is changed perforce into some other kind of Economic Man. There is no presumption that any particular kind of economic behaviour can exist in any kind of economic environment: indeed quite the opposite, for, given a postulate of uniformity, or reasonable uniformity in human potential, and an assumption of determinism, we have to suppose that there are environmental factors that determine what varieties currently exist at any place and time and it will be necessary to speculate about them. That, however, belongs to Chapter 9. We are here still concerned only with classification.

The *Near-Omniscient Man* is one all of whose economic knowledge is by definition accurate (both 'so far as it goes' and 'all the way'), complete and constant.

The requirement of accuracy implies that he can only exist in a world in which the satisfaction of his wants demands no exploratory or experimental acts, since accuracy is impossible under uncertainty. The completeness of his comparative knowledge ensures that he also makes no habitual or impulsive decisions. All his decisions are calculated in one huge coherent set. Moreover his comprehensive plan must cover the remainder of his days since time and money are scarce and the order of the finite (but notably large) number of decisions he can take affects the stream of realised experience which he plans, and he compares all relevant possibilities.

The fact that many of his acts are unavoidably probabilistic will often prevent his realised experience being exactly that in his initial plan, and he will at all times have to insure against risks. But he will have contingency plans in his locker. He may lament his luck but he will not regret his decisions. He would do the same again: he had the best probability distributions when he decided.

Like that of his opposite number his knowledge is constant. But whereas the *Ultra-Stupid Man* is too stupid to learn, this one cannot learn because he knows it all already, having acquired it in infancy. He foresaw, correctly, all relevant possibilities from the beginning. He was aware of the changing priorities he would assign to wine, women and song from the beginning, and even plans his memories.

It scarcely adds to the improbability of this being that he must be given a fixed set of moral beliefs as they apply to his economic affairs. Uncertainty will otherwise creep in. Moreover it had better be a selfish one. Any other might make an excessive addition to the remarkable burden of knowledge that he already has to bear.

In so far as the two extreme types of behaviour just summarised can be thought of as having respectively the minimum and the maximum stocks of economic knowledge it is tempting to think of all other types as arrangeable on a line between them, a Great Chain of Economic Beings running from lowest to highest. Unfortunately such a crude mathematical metaphor would be merely misleading. There are far too many dimensions to cope with for that, and the particles in most of them are too heterogeneous for mere counting to provide a helpful description.

Suppose that we started down from the *Near-Omniscient Man* and sought to reach the *Ultra-Stupid one* by some process of successive adjustment which we were inclined to think of as subtraction. Into the fully calculated set of decisions of this extreme we might think of introducing a little patch of habit, replacing a cluster of calculated decisions with habitual ones, removing a tract

of comparative knowledge. We could put in it at various points in his set of decisions, instrumental and final, and imagine ourselves widening and widening it, step by step, until it covered the whole set and we got right down to the other extreme of Ultra-Stupid behaviour. There would be many routes down according to the points at which we inserted the habits, many different varieties of behaviour at each point on the way. Nor is this by any means all. There are also patches of impulsive and exploratory acts to put in even though they would be removed again before the journey was completed; for the Ultra-Stupid Man shares with his far-opposite number the characteristics of making none, and they must be found a place for in intermediate types. Patches of them equally can be found along the list of decisions in all kinds of permutations and combinations of positions: more families of dimensions to cope with. Worse still we have to allow inaccuracy to be brought in, and though the varieties which apply only to immediate consequences will be taken out once more, there are masses of them to be temporarily insinuated on the way, and plenty of inaccuracies about remoter consequences to leave in. Finally, and worst of all (for even in Purgatory there are grades) there is adult learning to allow for in the intermediate types (if we are ever to apply intermediate patterns to situations including time).

What this brings out is that Near-Omniscient and Ultra-Stupid Men are not only extreme types, at and possibly beyond the limits of human attainment or failure, but also structurally exceedingly simple types. To the extent that the metaphor of dimensions is permissible economic behaviour has a great many, and they are placed at the extreme limits of different groups of dimensions. Great clouds of other types of behaviour may exist out in the intervening spaces, most of them, alas, moving, even wobbling, about over the successive moments of their lives.

To put the matter another way, because these extremes are thus simple they can be regarded not as possible general descriptions, but as 'models', general descriptions from which certain features of reality have been deliberately abstracted. They both abstract from inaccuracy, learning, impulse, exploration. But one abstracts also from calculation and the other also from habit. The Ultra-Stupid Man, it may be noticed, bears some resemblance to the old-fashioned anthropologist's view of Primitive Man, at least as that is understood by economists. The Economic Men of Part I are recognisably very close to Near-Omniscient Men. Descriptions, being facts, are sacred, but models, being constructions voluntarily created in the student's mind, may be varied to suit his purpose and judged in relation to their practical application by criteria of his own choice. By the two criteria used here Ultra-Stupid Man may or may not be a good model for application to primitive conditions but would surely fail outside them. Regarded as a version of Near-Omniscient Man the Economic Man of Part I seemed not unlikely to pass one test for most times and places but has still to be subjected to the second. Should he fail it,

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for all or some of them, the student would have to seek some other. Granting that the patterns of economic behaviour have been constantly changing in the course of history (and that he persists in wishing to explain history, or at least the economic aspects of it), he would have to face the probability that he would need a succession of models, and possibly the acceptance of a temporary coexistence of more than one of them. Furthermore, if he shared the deterministic predilections of science, he would require to find rules determining the conditions of this succession. The achievement of such a complicated triumph of historical explanation can be ruled out in advance, but speculations about what it involves are helpful towards the assessment of the contemporary merits of Economic Man that is our objective.

8

Specimens of Normal Behaviour

In the present chapter the concepts just defined are put to work to produce outline sketches of four types of economic behaviour lying somewhere in the wide spaces between the extremes of Ultra-Stupidity and Near-Omniscience. Though they are described in very general and summary language they purport to be models of kinds of behaviour that quite probably could have been close to the realities of behaviour found to be dominant among large groups of real people at various past and present times and places (were the inquiry practicable). It will help towards the plausibility of these accounts to indicate in a vague way the social and economic backgrounds against which they might be found, but we are not concerned in this chapter with causal factors.

It is a most inconvenient fact that learning and forgetting may be important features of the economic behaviour of any 'intermediate' type and that it can scarcely be described fully save in biographical terms. Here, however, we may concentrate on behaviour in the agent's maturity (say, age 45), only making where necessary a few remarks about the changes liable to take place in it around that age and fewer yet about trends further back or forward.

No obviously appropriate descriptive names suggest themselves for the four types distinguished, so they will simply be lettered.

Type A

This is closer to the Ultra-Stupid extreme than any other of the four.

(a) Men of this kind are markedly biased in the direction of non-economic activities: they devote more time and energy to them than is provided for in the 'standard' for the real income in question. Though it is strictly otiose here to peer over the hedge separating the economic from the non-economic, it may

be noted that religion seems to have been the most frequent of the non-economic activities absorbing quite exceptionally large tracts of time and energy. For many centuries in Europe the Church provided every citizen with ample and at the time unique opportunities for the enjoyment of man-made beauties of sight and sound, and endless encouragement for time-absorbing worry about eternal bliss and damnation. Other religions have done much the same elsewhere. The non-economic part of life can be emotionally and intellectually rich and varied even when the economic is not. It is not necessary that such religions should proffer denunciations of economic enjoyments, condemn them as morally bad—or that when they do ordinary folk should be much affected. Their own more positive attractions may imply a non-standard inattention to economic thought and action in no way rationally planned.

(b) Type A also have strong social motivations in their economic activities, duties of mutual support and respect going beyond the nuclear family to wider family clan or community groupings (as well as expensive economic duties towards the Church). These will further limit the prospect of much accumulation of technical knowledge and capital in that the innately greedy and innovative will be restrained from escaping from established patterns by inability or unwillingness to resist the pressure to share potential increases in earnings with those whose natures diverge in the opposite direction, and with the priesthood.

(c) By middle age these men will be making predominantly habitual decisions in both their production and their consumption activities, their position in their group having become established. They will certainly not often be acting on impulse or be at all exploratory or experimental, though there may be some remains of the more careful calculations that they made before they settled down. They will largely have ceased learning, but erstwhile novelties now becoming customary in other groups in their society may spread by imitation to them, much more slowly than they do to the younger specimens of their own type.

A predominance of this type in a community would seem inconsistent with high and rapidly progressive material conditions. Even when resources and technical knowledge are favourable to this possibility, the anti-economic bias will stand in the way: and if they are so favourable as to overbear this, the bias may crumble under the pressure of material temptations.

Type B

Type B (a) has a general bias towards and not, like his predecessor, away from economic activities. But (b) he has a moral code which commands him to stand well with Society by piling up as much solid wealth by legal means as he can and conforming with some corresponding consumption pattern. This is a particular kind of moral code: not a set of social motivations, as it would be

if particular known persons outside his family were to be pleased (or have their noses put out of joint), and it is consistent with his being (c) selfish.

He will be a harder worker than unbiased men and men without a moralised lust for wealth, and his instrumental acts will contain mostly calculated and some experimental decisions. There is no reason to assert that his technical knowledge is complete—as a normal man he will not be an original thinker—but it will be accurate, and he will be alert to technical advances made by exceptional men in the society around him.

His expenditure pattern is not calculated in detail, nor, however, is it an habitual one learnt in youth, still less impulsive or exploratory. It is one imitated *en bloc* from that of people proceeding up the income scale before him, and becomes habitual only when, net of savings and the evolution of family responsibilities, this stabilises. His expectations of the conscious experience accompanying new arrangements of his consumption as he rises may be inaccurate except in the characteristic that this pattern is, indeed, that which those whom he imitates exhibit. It should be particularly noted that there is not the remotest presumption that it is that which Near-Omniscient Men spending as much would choose. Where those he imitates it from got it in turn is a question to be separately determined.

Thus Type B is much of a conventional Economic Man in his business life, his stream of instrumental decisions, but he is not one in his final decisions, in his life outside the market place. To put it in the more familiar jargon, he maximises his money income in about as rational and well-informed way as may be possible—far from a guarantee of equilibrium—but he does not link this with an intelligent maximisation of his net utility flow.

At the very lowest levels of real income the attempt to satisfy the barest material needs may be supposed to dominate non-economic wants. Hence at that level a 'bias' towards the economic seems impossible as that is (all too vaguely) defined here. The existence of Type B will be excluded almost by definition from such conditions. But it may exist in a wide band of higher incomes where bias is practicable, and it could largely explain a rising level. Once affluence prevails, however, one would guess that Type B's fatuous inattention to the possibility of intelligent uses of consumption and leisure would crumble. There is something mid-Victorian about Type B; Gradgrind would call him brother.

Type C

Persons of Type C are (a) without bias between economic and non-economic activities, (b) lack social motivations and are selfish, (c) do not have a moral code that comprises many bans or injunctions with respect to private and family behaviour. Thus far they do not differ from the conventional picture of Economic Man but in one major respect they depart very far from him: they

have nothing like his wide-ranging comparative knowledge, his calculating capacity, his ability to envisage myriads of alternatives simultaneously and range them in order of preference accurately. (d) In their consumption behaviour they have very little calculation, a few habits but make many impulsive and exploratory decisions. By contrast (e) their instrumental decisions, their business lives are largely habitual.

This is not a pattern that can be seen close to the level of bare subsistence: it is hard to think of conditions in which a great variety of qualitatively different ways of keeping barely alive will exist. But it can show itself higher up, especially when consumption is rising and at extremely high levels it may predominate.

Two variants of the consumption pattern can be distinguished:

C(i) The Passive Variant occurs among the less imaginative, probably the uneducated, as their real incomes rise with general economic progress or social arrangements by which earnings rise sharply with age. New consumption goods or old ones so changed in design and material as to be largely different are thrust upon a public receptive to change and not prone to question their merits by an active commercial class skilled in the old arts of the hustler and the still fouler vices of the advertisers. Even in the early middle age at which they are being inspected they are still being much pushed about, perhaps a little less than in early youth (when they were nearly omniscient every day), and more than later on (when they settle into habit and grumble at the difficulties of finding goods of the qualities they are used to). But until the stiffness of age descends on them they are constantly learning and forgetting final pleasures and pains. Their expectations are often inaccurate even in respect of short-term consequences of novelty, and they are very ignorant of the long-term indeed.

C(ii) The Active Variant entails a public more consciously aware, whenever contemplating consumption choice, of wide ranges of untapped final experience. (If it be—and well it might—one definition of an educated man that he knows that there are infinite masses of final experience, often realised in the past and much never yet realised by anyone, that he can never encompass himself, then they tend to be educated men.) Against a background of habits in trivial matters, they explore this experience until with age their powers of learning fail. Until then their sensibilities are changing and their memories are accumulating (and doubtless too distorting their pasts).

The distinction between the two variants is of degree rather than kind. The active learners were probably launched in the general direction of their explorations by the vague promises of splendid experience down those tram-lines in early education, and they may be followers of fashion later too, less critical in following it than they realise. But they are more confident in following up their successes in an independent fashion, more aware of what is

happening, more conscious of choice, less innocently subservient to the hired liars of commercialism than the passive.

Since it is chiefly economic thinking in early middle age that is being described, the assertion of habitual behaviour does not exclude men of Type C from having attempted an intelligent choice of career at the beginnings of their working lives or even spending several years in exploration and experiment. But, being by comparison with Economic Men lazy in their decision-making, they will soon have settled down. Moreover, the society in which they live being well-to-do and thus complex, with specialised occupations, between which mobility is difficult, their initial forecasts will only coincidentally be accurate 'all the way'.

A man would have to be near imbecile not to recognise that he needs to make provision for sickness and old age. With Type A this end was served by accepted social obligations, with B incidentally to the pursuit of wealth. Calculated savings may be the one kind of economic decision that C takes after some conscious attempt to view his life as a whole. But their decisions elsewhere not being taken in a calculated manner, they are unlikely to be very intelligently and continuously provident in this area. It is notable that all three of the groups which spring to mind as probable exemplars of type C in other respects are not active planners of their savings. Aristocrats with large incomes from rents are characteristically such adventurous spenders that they ruin their families if not themselves; an affluent working class uses its political influence to secure public provision of health services and pensions; while intelligent employers find that the educated middle classes are attracted by occupational pension schemes.

Type D

The appropriate scene for the last of the four types distinguished here may be set before his characteristics are described.

The economy in which he lives is poor, but not right down at minimum subsistence levels for more than an unlucky minority, and there is great comfort at its top. With hard work modest comforts are accessible to most. It is slowly progressive, the real incomes of the majority creeping up generation by generation. Law and order are well established and such political excitements as occur would strike observers from most other societies as very small beer. Much of such net investment as occurs is in the improvement of houses, the climate being such that warmth and shelter are urgent needs and most attractive indulgences.

The inhabitants are a homogeneous population almost all of whom fit Type D closely. They are (a) unbiased and (b) selfish. Their moral code is utilitarian but recommends fair dealing (which may perhaps be classed as a social

motivation). Their religious beliefs are strong but kept to the non-economic part of their lives, not a very large part at their income levels.

They are literate, numerate, and intellectually alert (kept at it by innumerable theological controversies in their religious hours).

Their business lives are of a thoroughly calculating kind: there is not much uncertainty in the slow movement of their economy. Their business knowledge can be virtually complete and probabilistically accurate. Their technical knowledge is limited to the set of crafts needed for their simple tastes. Their farming and other skills are both hard to learn and quite efficient for conditions in which savings for fixed instrumental capital would be very scarce even if high technologies were known. Their environmental knowledge can be sound too.

In their savings behaviour, which is very much the link between the instrumental activities of the business life and the final activities of expenditure, they are provident and calculating too. They have not the great cousinhood ready to support them in age and sickness that Type A has, nor though they invest much in the education of their children can they be sure of their survival, nor are there the social services Type C can at worst rely upon. So they are careful savers, happy to be in an economy in which no great uncertainty reigns in a capital market largely composed of real property. But they have not B's wealth-demanding moral code so that they can, without scruple, balance work and income against leisure as well as consumption now against consumption later.

Finally they calculate with care and accuracy as regards the immediate consequences in their consumption expenditure. No very large range of consumption goods is known to them, partly because they are not very rich, still more because their natural resources are limited and they have no great scope for trade with other communities. The range is small enough for careful choice to be physically practicable even for these busy people, though it takes the form of a careful discrimination between qualities of a few goods rather than picking about in a great range. Though in this society the casual visitor may suspect that habit reigns, this is illusory: the local inhabitants only fall into habit in their later years when experience has taught them to choose quickly. What they know they prefer from the limited set of alternatives before them. There is not much adult learning in this society. Most of the knowledge available is quickly acquired, and the intelligent elder neighbours who have gone up the income-scale before have sifted most of the alternatives of higher consumption.

Here then is a Conventional Economic Man. The time and the place for him are plainly Northwestern Europe in the eighteenth century—ripe for the picking of classical economists. (Perhaps they were the only time and the only place at which such a model would be a good one.)

[On Economic Man]

These four types have been described in very general language. Sharper and more detailed portraits, involving the splitting up of these into many more types and bringing in new ones, would have required much closer specification of the 'location' in their sets of decisions of the different types of decision—calculated, habitual etc.—of their morals, of their bias to and from the economic, and (worse still) of where their stocks of knowledge were incomplete, how they were inaccurate, and what they learned and when. But perhaps this little gallery is sufficient to suggest that there are indeed great variations in many directions in economic decision-making and that Economic Man is utterly remote from many that may have existed or may exist today.

9

The Evolution of Normal Economic Behaviour

Any economics that does not go far towards guaranteeing its utility by confining itself to merely momentary affairs, abstracting (somehow) from time, must cope with changes in the behaviour of the agents it studies. Even over quite short periods that of the adults present throughout will usually be changing in ways that go beyond the mere effects of ageing, and the young who enter to replace the departing old will differ by more than youth. Discussion of the determinants and trends of such changes was evaded in the last chapter by largely confining description of various patterns of decision-making to one moment in the lives of the four types described. It will be taken up here in two stages.

The next section contains an attempt to sort out in an orderly way the factors which determine changes from one generation to another to the next. In the two that follow, faintly pursuing (for the last time) the visions of historical explanation in which we indulged in Part I, we may state some hypotheses about the secular evolution, over many generations, of the patterns of economic decision-making. None of them embodies the strange fantasy of perpetual and universal Near-Omniscience into which, as it now seems, we were inveigled in Part I, and in the concluding section we may note briefly how it is that all these exceedingly diverse hypotheses may be equally plausible in accounting for the main objective trends of economic history. The reader need scarcely be warned that the argument throughout this chapter is speculative and generalised—and unsupported by fact—to the highest possible degree. We come back to earth in Chapter 10: meanwhile we plane uninhibitedly around vast tracts of space and time seeing all the facts we need, and wondering about the dynamic patterns into which they would fall most neatly.

Let us suppose that we possessed an immense collection, gathered from many

times and places, of linked pairs of descriptions of individuals' stocks of economic knowledge. Each pair contains descriptions of one man's knowledge at age 20 and age 45 and is linked with a pair stating the parallel stocks of knowledge of his son. The latter is supposed, for convenience, to have been born when the father was 25 and to have entered upon adult life at age 20, so that the father 45/son 20 stocks are simultaneous. The learning that each individual achieves, or is subjected to, between birth and 20 we may simply call his economic education; the learning and forgetting that occurs between 20 and 45 is a large part of what for want of a better term has been called his adult learning. We are in search of some general rules determining the extent and nature of the changes in the stocks of knowledge from father at 45 to son at 45, that is in economic behaviour from generation to generation.

Let us for the present ignore the possibilities that there has been anywhere in the many pairs we are inspecting either some genetic change or some physical event affecting the potential of the children in such a way as to make it impossible for their stocks of knowledge being closely similar to their parents' at the 20/45 point when education ceases. That is, we assume all our pairs to have the same potential, disregarding minor variations around it and also the exceptional persons who will go outside this range of minor variations.

Then to determine changes from generation to generation three weak general rules, first approximations, can be suggested for amendment and comment:

- A. Men will educate their children to have at 20 the same economic knowledge as they possess themselves at that point, i.e. when they are themselves 45 and may have learnt (or forgotten) much since they were 20 themselves.
- B. What they learn from 20 to 45 will depend partly on the amount of additional knowledge there is in the community around them available for learning and partly upon their learning capacity.
- C. Normal men do not discover radically new knowledge in the primary, secondary, technical and environmental fields: they learn from among what is available among other normal men and what is added by exceptional men.

An immediate but minor qualification to A is that the 20-year-old will naturally have a frequency and intensity of motive appropriate to his age group rather than that of his parents: the rise and fall of physical and mental powers has a rhythm associated with age that must be taken for granted. Rather more significantly, when this 'passive' kind of education is conducted in schools the knowledge acquired will be some selection from that of the group who thus seek to reproduce their own rather than that of any particular parent.

The force of Rule A vanishes and it has to be replaced by altogether more complex rules derived from a theory of the determination of educational policy, coupled with a theory of the effectiveness of education, when this 'passive' education is replaced by an 'active' education deliberately designed *not* to reproduce parental knowledge in the malleable infant. This may happen either by parental wish or by the intervention of the state. This is conspicuously one of the points at which the combined efforts of many varieties of social science would be necessary to effective discussion, and only a few jejune remarks will here be offered.

In poor static societies where most men may be near the Ultra-Stupid end of economic behaviour active education will be rare. It will emerge in conditions of economic progress when there is occupational mobility and a spread of incomes, and parents can begin to afford to provide their children with technical and general education superior to their own. When imposed by the state different problems are raised since the content of education is then, of course, settled in the political process. But in reasonably democratic conditions it will usually be found that what is provided is merely more (because compulsorily financed and subsidised) of what the parents would have wished to buy on their own account. (However, in a large state organisation, bureaucratically controlled, it is always possible for the fashions of educational theory to take charge: it might even occur that children are taught, by teachers scarcely older than themselves, that abjuring toil, and learning to despise all their parents' experience, they will attain omniscience about the conduct of their adult lives long before they have had any adult experience at all.) Of the effects of the education imposed by tyrannies upon economic behaviour generalisation seems unnecessary here.

Rule B is not quite so empty as it appears. In a community of Near-Omniscient Men the 20-year-old would have no more to learn: however vast his learning capacity—or however limited the maximum stock of knowledge relevant in the material conditions of his society—it will, as it were, have already done its job. Even if the society be progressive, so that he will move eventually into situations his father will never know, he will have learnt by 20 (or so soon as he makes his economic life-plan just after) all he needs to know. Except in that theoretically extreme (and practically non-existent) situation there will be much still to learn, and the more the more advanced and progressive the economy. Market information will be thrust upon him, much of it inescapably, and he may be unable to avoid the attentions of advertisers. But men vary even in the degree of their mere receptivity to information flooding about them and still more in the extent to which they actively seek it out and bring it into calculations of any kind. It is this depressingly elusive variable that is here referred to as learning capacity. If we are determinists and if we believe in a wide uniformity of human potential we have to suppose a uniform 'capacity to acquire learning capacity' and aspire to know the

variables upon which a particular realised capacity depends. Bias between economic and non-economic activities, education, physical health, the dynamism of the society in which he lives, his social motivations, and the extents to which his work and consumption are already of kinds to absorb much mental energy are some of the all-too-inchoate variables that may be guessed to be important.

Rule C is in quite as much need of being given operational precision as A and B (and the need must equally go unsatisfied here). It seems to be the case that big additions and adjustments to the stock of kinds of primary knowledge in a whole society, to the range of distinguishable emotions and attitudes that normal men feel in it, do not take place suddenly, and that like changes in the kinds of commodities and services that satisfy these wants, secondary knowledge, are also slow. Cultures do not evolve at any furious pace, though collisions between them may be suddenly destructive or creative. There is a stream of additions which is acutely localised, but they are contributed by exceptional men or quite normal men either floundering, guideless, in unprecedented situations, or creating them by experiment or coming upon them by accident and having the wit to accept them. These are then noticed and adopted by others; they percolate gradually and move up or down or across social groupings in contact with the originators.

It is these commonplaces that Rule C seeks to summarise in a brief formula. All but the stupidest of men must in the course of their economic lives be constantly forming expectations of events unprecedented in their earlier moments, even if it be only of the experience to follow increased rates of consumption of familiar goods. Some capacity to extrapolate remembered experience must be given them but the source of their expectations about events of which they have no memory must be supposed almost always to be their observation of persons who have been there before, empathy and a willingness to believe their reports. They may be in direct contact with some exceptional person who has made some genuinely original discovery, but, since these are rare, they are far more likely to be learning simply from normally endowed predecessors and if what they learn was once a novelty to everyone that was long ago.

Only in a society of Near-Omniscient men, remaining such from generation to generation, will Rule C become otiose: there, as it were, they are all exceptional men and there is no role left for genius.

The limiting cases of selfish Ultra-Stupid men and selfish Near-Omniscient men do not learn from anyone else in their adult lives. Communities of such persons lasting from generation to generation would seem to be atomistic economies and the agents autonomous. Nevertheless they would of course have been held together by the kinds of education given to children in them, and they would only differ from other societies (all one may safely assert that ever were or will be) in that in them men were not continually learning from

each other in their adult lives. The man who sheds his social motivations and lives in a politically free society may have shed part of the control that others have over him, but he is still a puppet on the string of social evolution.

In the final allusion to the historical exercises of Part I, and making some illustrative use of the remarks just made about generation to generation changes in economic behaviour (and still more of our temporary suspension of doubt about the availability of evidence), let us now quickly contemplate four summary theories of the evolution of individual economic behaviour over the hundred or so generations of the history of the western world.

We may be reasonably sure—if only in the sense that when one is ignorant enough nothing can be reasonably denied—that over these three millennia or so, changes in the genetic endowment of the population have occurred in a manner that may be significant to economic history,¹ that changes in average health have been important, that there have been shifts to and from 'standard' concentration on economic affairs, that political factors have often dominated and that changes in moral belief and social motivation have been influential within the range of economic activity. The philosopher of history, that most ambitious of scholars, may weave all those into his elaborately patterned story. But here we abstract as best we can from them all, to concentrate upon variations in the degrees to which men have been wholly rational and well-informed in their economic affairs. Four alternatives to the perpetual Near-Omniscience of Part I may be summarily described first and summarily commented on afterwards.

1 The Equilibrium Theory

This is so nicknamed because it is the nearest to that of Part I, where complete equilibrium was usual, and to many contemporary growth models where it is also provided for.

Here men are effectively always near-omniscient in their 'final' acts and experience but not so in their 'instrumental' decisions, their business lives. Their trouble there is a deficiency of technical knowledge. Gaps in this body of knowledge are always being filled intermittently by accident and genius, but the range of technology presently relevant changes with economic progress and they never quite catch up. This pattern of discoveries is essentially a random affair—you cannot forecast your discovery of what you do not know—and it falls upon large industries and small, is sometimes greatly cost reducing at little total cost, sometimes only slightly so at great immediate cost. (There is no 'overall rate of technical progress' in this world.) This introduces true uncertainty into their business activities, and waves of business optimism

¹ The grandest effort to show the dominance of this factor known to me is Professor C. D. Darlington's *Evolution of Man and Society*, 1969.

and pessimism. The more advanced and highly capitalised society becomes the more disturbing these will appear, though technical discoveries in the methods of public policy may eventually dampen the fluctuations of the animal spirits of investors.

2 The Progressivist Theory

Here the theory is that men started at the Ultra-Stupid end of the scale, deficient and erroneous in every kind of knowledge but, over the generations, have been catching up. No only have they, in the course of the material progress to which their learning has led, learned much: they have also learned to learn and to fill the gaps in the evolving body of the relevant ever faster as they go along. In the most optimistic variant the process is complete when the reader has finished the author's account of it and shares the near-omniscience of the society he celebrates in his final chapters.

The details of historical change on this hypothesis will be exceedingly complex, for progress need by no means be uniform and unilinear. Advances of a radical kind in society's knowledge will come from great or lucky men in each and every area of knowledge and they will not spread instantly to everyone, but rather percolate from group to group. The uneducated classes may remain for many generations near their original stupidity or, as they change, imitate by slow learning errors the educated have already discarded. Moreover with respect to the higher pleasures and the sensibilities that take years to acquire perhaps even the most self-satisfied of expert observers at the latest date will concede that progress has not quite been completed, even for his own intellectual group.

3 The Deteriorationist Theory

At the materially poor and somewhat static beginnings of modern civilisation men were indeed near-omniscient. In those conditions only small bodies of knowledge were relevant, little intellectual energy was required for full efficiency in decision-making, and normal men were fully equipped with it. But then some political, demographic or moral change, perhaps incorporating a shift from time-consuming non-economic activity to the economic, permitted rapid economic growth, and they floundered.

No doubt it would not be found that the technical innovations adopted to meet wants that have become relevant for the first time were repeatedly and predominantly inefficient in the sense that in both the short and medium term they were financially unprofitable to those who made them. Those first in a position to enrich themselves succeed in doing so. No doubt the coarse multiplication of existing goods and services that, first impulsively and then habitually, they consume bring immediate gratifications, though, now overfed

and overdressed, their health declines. Similarly the new commodities they adopt, the new motives and identifications that occur to them are not immediately disagreeable, but they have longer-term effects not noticed. (They smoke and drink new and dangerous spirits.)

Those who are not first in the achievement of material progress are foolishly inflamed to imitate those who are. They make what the Omniscient Observer recognises as false comparisons. They forget the modes of getting and spending taught in their parents' passive education of them, and go off to toil longer hours in towns for increased real wages, spent in small-scale imitation of the now rich. They first reject and then forget their education and teach their children that further material gain is the supreme aim, losing track of rational choice between work and leisure, as well as between one expenditure and another.

Since the theory is defined in terms of the accuracy and completeness of relevant knowledge, it is not necessary to its confirmation that in the growth process economic welfare should actually decline: it is sufficient that all, or a very large proportion of the population would, were they capable of considering what lives near-omniscient men would by now be leading, recognise that they have fallen far short and are falling further. But it is conceivable that an absolute deterioration would be identifiable. This would particularly be the case if we could ascribe to a failure of private economic decision-making (rather than to political) an incapacity to handle the externalities of a high material development.

Whether relative or absolute deterioration is seen to be occurring by the Omniscient Observer it will not in fact be noticed by the general public. Normal men, on this view of their mental capacities, are not to be expected to be able ever to envisage, and compare with their own, the streams of conscious economic experience of their parents at an age corresponding to their own—let alone that of Near-Omniscient men.

A resolute Deteriorationist might also insist that it is artificial and damaging to the force of his case to insist upon abstraction from political behaviour. Efficient decision-making in politico-economic affairs is certainly more demanding intellectually than in private, if only because so many more persons are involved. The Progressivist will agree that in advanced economies discoveries in policy techniques may be somewhat belated and that this, even on his view, may be a threat to progress. The Deteriorationist would insist that increasing political inefficiency will be a determinate concomitant of his view of private behaviour.

4 The Cyclical Theory

Men start near the Ultra-Stupid end and, as in the Progressivist view, gain relevant knowledge first by accident, then by propagation. But here progress

is mostly in technical matters to begin with. They become greedy and imitative and only more gradually learn to use their incomes in a well-informed way. For many generations the behaviour of the better-educated converges upon that of the Near-Omniscient man but at a diminishing speed. Then, with economic progress, as the requirements for new learning ever increase, their capacity fails. Instead of still further increasing the coverage and accuracy of their calculations across their previously habitual and imitatively impulsive sets of decisions, the rich begin to wallow in exploratory consumption and become idle and thriftless. The poor remain greedy, imitative and jealous. In this version also, politics cannot be readily abstracted from, and the economy breaks down with the failure of accumulation per capita and the destructive revolts of the frustrated poor. Education too breaks down, and the community reverts to where it started, most of the progress in knowledge it had achieved being lost.

The cyclical characteristic of this theory derives from the proposition that having got back to the beginning with the stocks of knowledge and material capital largely obliterated the same rise and fall begins again. The next cycle will not quite reproduce the first, some relics of the first civilisation being still about to inform and inspire first exceptional men and then their imitators. But the resemblance will be strong. Thus this tale is less depressing than the third. There all may be lost, here not all is. New civilisations may arise though one's own is mortal.

In terms of the variety of types distinguished in Chapter 8 the Equilibrium theory posits something fairly close to D, a conventional Economic Man but with touches of Keynesian analysis in business behaviour. The Progressivist theory moves from A to D through something like B. The Deteriorationist starts from D and moves down through B to disaster. The Cyclical goes A B, almost to D for some people then C and back to A and round again. But they can all also be rationalised in terms of different views of the learning capacity of mankind. In the Equilibrium theory it is in all situations thoroughly sufficient save only in the matter of technical knowledge (the exception that distinguishes it from the world of Part I). In Progressivist theory it starts deficient but catches up even with the mounting mass of knowledge required. In the Deteriorationist it starts sufficient but becomes increasingly insufficient as the world complicates itself. Finally in the Cyclical starting insufficient it approaches adequacy but the world becomes too much for it with the progress of wealth, and the second phase of inadequacy turns progress to retrogression.

The Equilibrium theory, so far as the writer is aware, has never been seriously advanced as an historical hypothesis. It merely lurks about in abstract growth theory. By contrast, Progressivist theory, however crudely it has been expressed here, has a long and entirely respectable history. For an economist its classic exposition is in that Appendix A to Marshall's *Principles*

which in the earliest editions was introductory to the whole work. The Deteriorationist Theory, here devised merely for economic behaviour, borrows from a long line of romantic moralists and has obvious theological affinities. The name is borrowed from Thomas Love Peacock in whose *Headlong Hall* Mr Escot, the deteriorationist, memorably disputes with Mr Foster, perfectibilian, the very model of a progressivist. (Abounding evidence is asserted on either side, and the author, as befits a colleague of James Mill and a friend of Shelley, never quite pronounces.)

The deteriorationist phase of the Cyclical theory suggests itself irresistibly to anyone who has lived through the half century since the death of Marshall; who dares to believe that even to him, who foresaw so much, the private and political economic behaviour of normal individuals in these later years would have been unimaginable and who resists total despair. The touch of hope in it, the subsequent resurgence (and the seeds of new decay) which produce the cycle, are appropriated from Giambattista Vico. Vico's *New Science*, composed in the second quarter of the eighteenth century, covers all human behaviour and, as to be expected at that date, the economic is not separately distinguished. He can be acclaimed as founder of among other social sciences, sociology, but he has a special relevance to the economist as the progenitor of growth-models. His presentation moves, rightly, to and fro from fact to theory and back, but much of it can be read as a logical derivation of social evolution from the 114 terse postulates he asserts early in his book. Among these especially suggestive here is LXVI:

Men first feel necessity, then look for utility, next attend to comfort, still later amuse themselves with pleasure, thence grow dissolute in luxury, and finally go mad and waste their substance.²

It is singularly obvious that it would be impossible to bring these alternative hypotheses about the evolution of economic psychology to any kind of test. 'History', as Keynes remarked to a solemn undergraduate, 'is, of course, a branch of *belles-lettres*.' Any assessment of the merits of Economic Man as a theoretical model by what was earlier called the Subjective-Inductive criterion has to be made by reference to contemporary behaviour. To that we come in the next chapter and these historical speculations (herewith terminated) help towards it chiefly by widening the range of possibilities to be contemplated. But they also suggest some cautious revisions to the rather favourable verdict on Economic Man reached in Part I when he was solely judged by the Objective-Deductive criterion.

To me it seems plausible to guess that if the numerous accounts of economic psychology other than Economic Man's sketched above were elaborated to the point of being able to predict the gamut of men's economic actions, and if then

² *The New Science of Giambattista Vico*, trans. T. G. Bergin and M. H. Fisch, New York, Cornell, 1948, p. 70.

we constructed from these accounts the kinds of miniature history derived in Part I from Economic Man, the various competing sets of histories could readily be made to show the same qualitative features as regards the principal objective aggregates of development (all that they would be designed to show). This is because the Economic Men of Part I and the variety of other kinds of men in the four tales just sketched all have certain very general qualitative characteristics in common. They all seek to satisfy their simple animal needs and, resources, morals and politics permitting, have the wit to do so. All too are greedy for more material things than that, in the sense that, in the short term and over a range of real income going up to very high levels, they work to increase their real incomes if they can do so without working harder (though that they may sometimes also do), again morals, law and resources permitting. These harmless-looking and even highly probable assumptions about human nature would turn out, I guess, to be sufficient and necessary for the qualitative stories concocted. Where all these men would differ in respect of their actions—of course their subjective existences would differ *toto caelo*—would be at the level of absolute magnitudes and of the exact definitions of the particular types of goods and services and efforts subsumed within the aggregates (by aggregation processes from which we have averted our eyes).

Hence the claims made for Economic Man on the strength of the argument of Part I must be stated very modestly. He generates plausible qualitative histories. We do not know, and may be assured that we never will know, whether for the past he does more, predicting quantities of a well-defined and measured kind. Furthermore he is probably not the only model that would do as much as he does: he is no more than the only one we have. This is something, especially when we remind ourselves of the extraordinary profusion of aggregative sequences over great extents of time and space that a single little structure would appear to predict and explain: but it is not very much when we also remind ourselves that aggregates have to be reached from their components and have no independent existence. Above all, however, the Objective/Deductive merits of Economic Man turn out to tell us nothing about his merits when assessed by the other Subjective/Inductive criterion.

10

The Inadequacy of Economic Man

Part I sought a judgment on the merits of Economic Man in terms of the capacity of this model of behaviour to throw up plausible predictions about the objective magnitudes with which economics is largely concerned. Though the favourable conclusion reached has just been somewhat moderated, it remains. The present part has aimed at assessing Economic Man by the further criterion of his adequacy as a simplified account of the conscious psychology of economic agents. To that judgment we now come. The ramble over the wide range of possible psychologies which has occupied the last three chapters has been intended to provide materials for it. Readers have been encouraged, it is hoped, to stretch their imaginations to cover much of this range, and to muster as much of their own introspective knowledge, their observations of their neighbours, and what they have heard of others, as will enable them to reach their own *prima facie* conclusions. So short, loose and speculative a discussion as this has been is most unlikely to lead all its readers to the same conclusions. But I here give mine.

It was remarked at the end of Chapter 7 that the Economic Men of Part I, when set against the classification of types of conscious economic behaviour there sketched out, appeared to be, in their miniature way, closely akin to Near-Omniscient Men. It would, however, be an obvious misrepresentation to suggest that the version of Economic Man theorists have customarily had in mind at all exactly resembles this extreme type. Near-Omniscient Man was thrown up as a limiting case defined by the completeness and accuracy of all the six categories of knowledge there distinguished. It was no more than an extreme logical possibility: its practical relevance evaporates when we remind ourselves that to spell out its contents we would need Near-Omniscient Observers.

It is not, in fact, altogether easy to define, in the terminology used here, what exactly are the characteristics of the Economic Man conventional in economic theory. Multitudes of economists have made the assumptions that broadly define him, but they do not word them in the same way, they do not always word them carefully, and, above all when time creeps into their deductions, they do not always stick to them. Nevertheless it seems fair to say that the great bulk of the theoretical work of recent years in which a conscious psychology of individual behaviour is postulated, implied, or inferred, and in much applied work, an account of this psychology is used which does not depart very far from the extreme case.

The standard Economic Man I here assess has the following qualities:

1. He is selfish (i.e. has no motivations extending beyond his family, a limitation on his 'primary' knowledge).
2. His primary, secondary, technical and environmental knowledge is *not* complete, but it is accurate, but only 'so far as it goes', and in some cases probabilistic.
3. His business knowledge *is* complete, but also accurate only 'so far as it goes' and probabilistic.
4. Within the limitations of this material, his comparative knowledge is both complete and accurate: i.e. he calculates, maximises, right across the board of his economic affairs, both for the present and for all the future that he does not wholly discount.

Should the reader feel that this is false as a generalisation about the postulates that are in common use he is invited to modify the conclusions reached here to fit his preferred version: (He is indeed positively challenged to do so.)

The criterion to be applied is that which apologetically was labelled Subjective/Inductive in the introductory chapter. It is two-pronged. To be a good one a model must (a) be a genuinely practical simplification in the sense that, after it has been reached by abstracting from some elements of the complexity of the real world, what is left can be fully grasped and readily used by those who construct it. (b) It has to have been so constructed that it retains the aspects of real-world behaviour that are likely to be most important in the applied uses to which it is put—and must be put if it is to be more than an academic toy—and omits only the less important. Since economic psychology, as the discussion of this part has underlined, is a complicated subject, the omitted factors will rarely be insignificant. The applied economist will always have to consider them as best he can but his model will take him further and leave him less subsequently to allow for (whether 'by eye' or by investigation) the more of the practically dominant factors are embraced in his model.

These sub-criteria are plainly cumulative. The first is absolute: if a model is

unusable, cannot be applied, it is (naturally) useless and inapplicable, and that is that. The second is relative: there may be many usable ones but we want the particular one that takes us furthest, leaves the least important matters over for subsequent attention—or, if we must, different ones for different types of individual.

My own conclusions are (1) that Economic Man fails the first test, and (2) that if I am wrong about that it is devoutly to be hoped that we can find one that rates better than Economic Man by the second. I conclude this part by amplifying these summary verdicts.

One of the four specimens of normal behaviour sketched in Chapter 8 was presented as what has just been called a standard Economic Man. But the economic and social environment in which he might have existed was of a very simple kind, carefully rigged in every way to make his rational well-informed decision-making psychologically possible. Few, if any, such societies exist today. In advanced contemporary economies the ranges of obviously apparent choices of work and of conditions of work, of consumption goods, of vehicles for saving are so prodigiously huge that it wholly defeats the imagination to suppose that any normally-endowed individual could decide upon his actions over any short period in the rational and well-informed fashion postulated in the model, still less that he should do so over many periods ahead as is also required. By no stretching of the imagination can I conceive of the stream of consciousness of this model man as he carries on in the way his rules require that he should carry on. He has far too much to think out at once: no one can hold all that in his head.

It is no doubt easy enough—a cloud of textbooks tells us how—to state quite briefly (with the aid of $i, j, k = 1\ 2\ 3 \dots n$) the set of equations he is supposed to know and solve before he does anything at all in his adult life. But if Economic Man is to be a useful psychological model we require more than that. We have to get him off this algebraic sky-hook and bring him down to human ground level. This, for one, I cannot do, and flatly assert that no one else can do either.

Economic Man is not a manageable simplification, a starting point for theorising, a possible candidate for selection as the best of possible starting points. So far from being a simplification he is a psychological complication of appalling magnitude. He is, in short, a mythical monster—Argus, Briareus, Antaeus all rolled into one—a quite impossible guide for the inquiring student of mankind in the ordinary business of life.

This objection to the adequacy of Economic Man, to my mind, is sufficient and conclusive. Let us, however, assume, for argument's sake, that I underrate the imaginative powers of the normal students of these affairs. They can, let us suppose, indeed handle this model in practical investigation—something

different from proceeding on a tacit assumption that they could if and when they would. Then the second part of the criterion has to be applied.

As an illustration consider an economist who has succeeded in fleshing out a model of Economic Man with the specific patterns of tastes and abilities upon which his calculating abilities are to operate, and has managed to get these so stated that the recent prices outputs and incomes of some economy are consistent with its inhabitants being men of this kind, given the known supplies of capital, known institutional arrangements and so forth. He uses this to predict the progress of prices, outputs and incomes over (say) the next ten years which prove, happily, to contain no unpredicted and unpredictable external shocks (wars, revolutions, earthquakes etc.).

The investigator will not be disturbed when he finds, in the eleventh year, that there are substantial discrepancies between the predicted and the actual evolution. He will have been aware all along that he has been using a model that omits relevant factors and that he must now search those out to achieve such reconciliation as he can. But he then comes to consider the list of factors he must now allow for. They are:

All social motivations and changes in social motivations in the population.

All changes in private motivations.

All learning (and forgetting) about new commodities and unobserved qualities in existing commodities, about new techniques or unrecognised qualities about old, all reassessments of previously made business forecasts, all new environmental knowledge.

All habitual, impulsive and exploratory acts, the latter especially related to such true uncertainty as the agents in his economy (but not in his model) may experience.

All reactions to errors of calculation.

Any consequences of changes in the distribution of individual behaviour patterns created by differences between the qualities of those leaving the labour force through age or sickness and those coming in.

Each of these 'factors'—an expression that tends to raise the image of a number or set of numbers—is of course a category of diverse and numerous elements rather than a single entity.

The questions for answer are whether singly or cumulatively these factors are likely to be important in the contemporary world, and if so whether they can be identified and somehow allowed for. To my mind it is evident, from common observation, general knowledge and introspection, that they must be large and omnipresent features and must have been so for the last century. Maybe the first and last could have been safely abstracted from until recently when considering limited periods in advanced economies: but even that ceases to be plausible in the present decades of industrial strife and cultural turmoil.

[The Inadequacy of Economic Man]

It follows that even if the investigator can somehow fill in the initial parameters of his standard Economic Man in a plausible fashion—how?—and surmount the merely technical difficulties of calculating his prediction (which I assume) it is quite extraordinarily likely that, other than coincidentally, his predictions will not at all closely fit the eventual record, and that consequently he will have an utterly excessive task of reconciliation. He has, in other words, started out from a lifeless automaton excessively remote from the seething mass of stupid, mutable, evolving humanity with which his prediction deals, and miracles would be required for him to get very far with it.

I conclude that, in terms of the second part of the second test Economic Man, having passed the first, would still have to be reckoned a bad and useless model. If he be the best model of the conscious psychology of individual agents that we can hope for we had better abandon hope of any theory covering this psychology. But Economic Man is *not* the best model in this sense: he is no more than the only one we actually possess. Since no serious and sustained efforts have ever (to my knowledge) been made to find a better one, or a set of better ones, there is not even a presumption that they cannot be found, and economic theory be brought within hailing distance of providing valid explanations and predictions. Hence those who believe him, though manageable, bad, and who still require a psychological content to their economics, should, surely, join with those who do not even believe him usable, in discarding this totem altogether and in seeking some better starting point.

In an essay of this kind it is perhaps to be allowed that the author should confess that the main conclusion reached—and this is what the last sentence represents—is very far from that expected when the work started. To begin with I was satisfied with Economic Man as a model. The traditional criticisms seemed to me, as I believe they do to most economists, rather silly. That his selfishness may be immoral is irrelevant to positive economics (and not perhaps very important in normative either). That he has been held by some to provide a defence for *laissez-faire* capitalism is equally irrelevant to his merits in positive economics (as well as totally nonsensical to any reader of Pigou's still magisterial *Economics of Welfare*, Bible of the Welfare State and deeply dependent on the notion of Economic Man). That he is unrealistic is again in itself irrelevant: the reader must by now be tired of being reminded that all manageable models of man must have that characteristic. Thus I had no qualms about Economic Man, and was only impatient with theorists for failing to construct anything more out of him than stationary states (or expanding stationary states in which population, capital and, apparently, land grew at constant equal rates), and their rather shocking willingness to suppose that comparative statics was of practical relevance. Then a merely practical concern with the sectoral pattern of net investment in an accumulating economy (at a time when governments sought coherently to exercise many

more detailed controls than is now their custom) compelled an attempt to devise some relevant theory, and this, naturally, involved simplifying the elaborate calculus-based abstract versions of Economic Man to the point at which a more or less realistic-looking version of multi-sectoral growth emerged. Besides eliciting a monstrously simplified theory of the pattern of investment this incidentally threw up accounts of historical evolution which had a certain air of plausibility about them. (Part I contains their descendants.) From this, by a natural delusion, it seemed that Economic Man was an even better model than is generally supposed, and that the theorist's tasks could be seen as those of elaborating and rigorising the deductive arguments from this model (a task for specialists) and strengthening the practical realism of its postulates (keeping in touch with common sense, and not being carried away by the tempting intellectual fun of pure theory). Hence this essay started with the intention of demonstrating what an admirable model Economic Man was, and suggesting ways of enriching him further. Only in the course of writing it did the bubble burst, and the obverse program of obliterating the ancient myth in which I had so long believed come to seem to be the most urgent task for a penitent sinner.

In his memoirs, *My Past and Thoughts*, Alexander Herzen describes how he wrestled with and lost his early faith in Hegelianism:

Just as in mathematics—only there with more justification—men do not go back to the definition of space, movement, force, but continue the dialectical development of their laws and qualities; so also in the formal understanding of philosophy, after once becoming accustomed to the first principles, men go on merely drawing deductions. Anyone new to the subject . . . grasps at just these traditions, these dogmas which have been accepted as thoughts. To people who have long been studying the subject, and are consequently not free from predilections, it seems astonishing that others should not understand things that are 'perfectly clear'.

How can anyone fail to understand such a simple idea as, for instance, 'that the soul is immortal and that what perishes is only the personality' . . . ; or the still simpler truth that the absolute spirit is a personality, conscious of itself through the world, and at the same time having its own self-consciousness?

All these things seemed so easy to our friends, they smiled so condescendingly at 'French' objections, that for some time I was stifled by them and worked to reach a precise understanding of their philosophic jargon.

Fortunately scholasticism is as little natural to me as mysticism, and I stretched its bow until the string snapped and the blindfold dropped from my eyes.¹

¹ A. Herzen, *My Past and Thoughts*, trans. C. Garnett, rev. H. Higgins, London, Chatto and Windus, 1968, Vol. II, p. 403.

[The Inadequacy of Economic Man]

The bow of Economic Man was stretched as far as it would go in Part I. Has not the string now snapped, and should not the blindfold drop from our eyes? Certainly, the conclusions I draw from the discussion of the present part are that Economic Man is not a theory but a myth, and that if economics is to be other than a mythology it must cease to be founded upon the postulates that in their economic affairs men are rational, maximising and well-informed.

Part III
Economics
Without
Economic Man

11

The History and Standing of Economic Man

In Parts I and II a case has been put forward for removing Economic Man from the foundations of economic theory. Supposing—as at least its expositor is obliged to suppose—that, so far as a merely speculative discussion permits, it has been convincingly made out, three questions suggest themselves for further discussion.

First, we might ask how, if this be so bad a model, it came to occupy the position it has. This is more than a matter of curiosity. Delighted though he may be at the high level of eccentricity he will find on reading their biographies and letters no one could deny that the great economists were great men. That a bad model emerged from their work requires explanation, and the explanation may carry warnings for the future. Consequently the remainder of this chapter is devoted to a sketch of the history of the idea of Economic Man. The history of economic thought is now a matter for professionals, but this amateur offering, inconveniently long for a short essay, much too short for precision, may have its uses here.

Second, having pronounced that Economic Man is unimaginable and inapplicable, we might ask the uncomfortable question: what must be the intellectual or scientific standing of the profusion of practical conclusions that, for generations, economists have reached after reasoning and calculation which purport to make use of him? Though in passing remarks here and there I will confess some suspicions about the answer, this issue will not be tackled here. I am mindful of Marshall's injunction that the first duty of the student is to be diffident and the second to avoid controversy.

Third, we can ask what would become of economics if Economic Man were indeed ejected from it. Though, like the second question, altogether excessively wide for full discussion, this, unlike that, is at least constructive. Very

diffidently, and still with a desire to avoid a controversial note, it will be lightly explored in Chapters 12–13.

The general notions that men are at least potentially rational, that they are or could be well-informed about their own affairs (or at least more so than the kings or priests who wished to order them about for their own good), and that, within the frameworks of law and manners, their own affairs could be largely and decently restricted to those of themselves and their families—these ideas are the commonplaces of the Enlightenment, and of the liberal tradition as a whole. They permeate *The Wealth of Nations* and to that extent Economic Man can be said, and by his admirers is said, to enter economics in its earliest days. But in the sense and context which Economic Man is under attack here, this would be an exaggeration. The economics from which it is suggested that he be debarred is one pursued with as many as possible of the precautions and methods of science, one with a concern for careful definitions of elementary terms, systematic collection of empirical facts as 'hard' as their nature permits, precise inductions and deductions, the limitations of generalisations exactly stated and so forth. Though *The Wealth of Nations* may be much closer to being 'scientific' in this sense than any of its predecessors (and any of its successors until or except Marshall's *Principles*), it is far more a political-historical and literary treatise addressed to the general public in which fact, theory, and recommendations are blended together, all to be interpreted by readers of wide general knowledge and practical preoccupations. It is not the worse for that—and may be much the better—but it is for use in a different style of discourse that Economic Man is here judged, and it would seem to me wrong to read him back into *The Wealth of Nations*.

It is far harder not to pronounce Ricardo the originator. The logic of the first great masterpiece of rigorous and extended deduction in economics, his *Principles*, certainly presupposed Economic Man and depended upon him. But he is not there explicitly, and Ricardo is throughout interested in aggregative matters, not individual. Again it seems better not to ascribe to him what others later, and in this case very easily, drew out of him.

Considered in terms of what they actually wrote rather than of what they implied the two classical writers who contributed most to the eventual construction of Economic Man may be said to be Bentham and John Stuart Mill. The three-volume edition of Bentham's *Economic Writings* which Dr Stark prepared for the Royal Economic Society ends with a thirty-page anthology to which the editor very properly gives the title 'The Psychology of Economic Man'.¹ Here are all the components, only awaiting orderly assembly. But most of the passages Dr Stark brought together in 1954 were not printed until

¹ *Jeremy Bentham's Economic Writings*, critical edition, ed. W. Stark, London, Allen and Unwin for Royal Economic Society, Vol. III, pp. 421–50.

after Bentham's death, and are scattered about in the vast volumes of Bowring's edition of his works published in 1838-43.

If Bentham provided Economic Man with his psychology, his pupil and frequent companion, John Stuart Mill, provided the methodology for his use, underpinning Ricardo in his famous essay 'On the definition of Political Economy; and on the method of investigation proper to it'. This was written in 1829 (when the author was only twenty-three), published in a monthly journal in 1836, quoted at length in the *Logic* (1843) and republished in his *Essays on some Unsettled Questions of Political Economy* in 1844.²

Mill first separates Political Economy as a moral science from the physical sciences, arriving at two equivalent definitions: 'the science which treats of the production and distribution of wealth, so far as they depend upon the laws of human nature', or 'the science relating to the moral or psychological laws of the production and distribution of wealth'. This he pronounces amply sufficient for popular use, but short of the complete accuracy required for the purposes of the philosopher. He further restricts it by limiting 'the states of mankind' treated—only the 'social state' is covered—and then further by confining it to a 'certain portion' only of the laws of human nature. He ejects first two classes of law as belonging elsewhere: those that 'appertain to man as a mere individual and do not presuppose, as a necessary condition, the existence of other individuals (except perhaps as mere instruments or means)', and then secondly (and much less obscurely) 'those laws of human nature which relate to the feelings called forth in a human being by other individual human or intelligent beings, as such; namely the affections, the conscience, or feeling of duty, and the love of approbation; and to the conduct of man so far as it depends upon, or has relation to, these parts of his nature'.

Later in the essay Mill goes on vehemently to emphasise the nature of the science thus defined as abstract and its method *a priori*. It 'reasons from assumed premises—from premises that might be totally without foundation in fact, and which are not pretended to be universally in accordance with it'. It 'presupposes an arbitrary definition of man, as a being who invariably does that by which he may obtain the greatest amount of necessaries, conveniences and luxuries, with the smallest quantity of labour and physical self-denial with which they can be obtained in the existing state of knowledge'. He adds

It is true that this definition of man is not formally prefixed to any work on Political Economy, as the definition of a line is prefixed to Euclid's Elements; and in proportion as by being so prefixed it would be less in danger of being forgotten, we may see ground for regret that this is not done. It is proper that what is assumed in every particular case, should once and for all be brought before the mind in its full extent, by being somewhere formally stated as a general maxim . . . In proportion as the

² London School of Economics reprints of scarce works on political economy, Vol. 7, pp. 120-62.

actual facts recede from the hypothesis, [the political economist] must allow a corresponding deviation from the strict letter of his conclusion; otherwise it will be true only of things such as he has arbitrarily supposed, not of such things as really exist. That which is true in the abstract, is always true in the concrete with proper *allowances* (pp. 144–5).

This he repeats again and again in varying language.

Mill wrote this essay during the years of depression to which excessive subjugation to his father and an excessive diet of utilitarianism had reduced him. He makes no references to it in his *Political Economy* (1848), which (as Marshall was wont to emphasise) does *not* conduct the science as an exercise in abstraction and has ‘applications to Social Philosophy’ firmly announced in the title. Nevertheless it was twice reprinted in his lifetime and half a century after it was written it became the text for the passage, explicitly headed Economic Man, in J. M. Keynes’s *Scope and Method of Political Economy* (1891), the definitive Victorian treatise on the subject and still, perhaps, the best.

Economic Man, in the sense and context in which the term is here used, finally came into focus in Jevons’s *Theory of Political Economy* (1871) when Jevons linked up Mill’s methodology (widening as he did so the scope of economics to include the consumption pattern), Bentham’s psychology, and his own scientific and mathematical predilections. Economics—the new name he accepted between the first and second editions of his book—was at last repositioned, to derive its theory and application from a version of individual psychology.

Jevons recognised in the utilitarian calculus of which Mill had avoided mention a thoroughly scientific and quantitative basis for economics. He simply replaced Mill’s ‘arbitrary assumptions’ with the same statements in the guise of ‘inductions’, ‘known to us immediately by intuition’. (In the same paragraph he also calls them ‘axioms’.) He asserted the essentially mathematical character of this calculus and described this theory as the ‘mechanics of utility and self-interest’.³

He robustly claimed that ‘economics might be gradually erected into an exact science, if only commercial statistics were far more complete and accurate than they are at present, so that the formulae could be endowed with exact meaning by the aid of numerical data’, chiefly of prices and outputs. He adds: ‘The deductive science of economics must be verified and rendered useful by the purely empirical science of statistics’—a remark in which might be seen the germ of the ambitions set themselves by the econometricians.

Mill had announced Economic Man in very general language and more as the necessary logical foundation of the Ricardian theory of the equilibrium of

³ W. S. Jevons, *Theory of Political Economy*, Pelican Classics, 1970, p. 90.

the whole economic system than as an object worthy of detailed investigation. In Jevons he is still needed ultimately for the study of aggregates, but he is the microcosm out of which the macrocosm is composed and as such deserving of microscopic study. Most of his book is devoted to such a study, and it is here rather than in Mill that we have to look for the earliest of the rigorous accounts of the tract of behaviour inspected in Part II.

1. Ethical issues are briskly disposed of in three pages in advance of detailed discussion.⁴ A hierarchy of feelings is acknowledged but the economist deals with 'the lowest rank of feelings'.

The calculus of utility aims at supplying the ordinary wants of man at the least cost of labour. Each labourer in the absence of other motives, is supposed to devote his energy to the accumulation of wealth. A higher calculus of moral right and wrong would be needed to show how he may best employ that wealth for the good of others as well as himself. But when the higher calculus gives no prohibition, we need the lower calculus to gain us the utmost good in matters of moral indifference.

There is no recognition of the family unit, and no definition of 'ordinary wants'.

2. Jevons does not discuss the determination of wants and attitudes to work as an issue of relevance to economics. However, in a brief paragraph on the equilibrium between the marginal disutility of labour and the marginal utility of income he remarks that 'questions of this kind depend greatly upon the character of the race', illustrating this with references to Negroes and 'poor savages' and quoting with approval Bishop Berkeley's question 'whether the creating of wants be not the likeliest way to produce industry in a people?'.⁵ A fixed set of utility functions is thus implicitly assumed for individuals but it is allowed to vary from individual to individual.

3. He opens his discussion on the measurability of pleasure and pain by accepting Bentham's sevenfold classification of the relevant considerations: (i) intensity, (ii) duration, (iii) certainty (or uncertainty), (iv) propinquity (or remoteness), (v) fecundity (the chance it has of not being followed by feelings of the same kind), (vi) purity (the chance it has of being followed by feelings of an opposite kind), (vii) extent (the number of persons affected). He then promptly dismisses the last three: important for morals 'they will not enter into the more simple and restricted problem which we attempt to solve in economics'. The dismissal of (vii) merely reflects the atomism of his model of decision-making: but the brushing aside of (v) and (vi) is interesting as confining his notions of accuracy to immediate accuracy and abjuring concern with 'accuracy all the way'.

4. It is startling to fail to discover in Jevons's central chapters any discussion

⁴ *Ibid.*, pp. 91-3.

⁵ *Ibid.*, p. 198.

whatever of errors in the forecasts of individual decision-making. He recognises the time-discount implied in Bentham's propinquity with the phrase 'the intensity of present anticipated feeling must . . . be some function of the future actual feeling and of the intervening time'. He adds that the statistical probability of all future events must be allowed for. But that is all.⁶ His is a world of probabilistically accurate foresight into immediate consequences. The existence of uncertainty is undiscussed, and even probability only makes a brief appearance.

5. Though it is only in a footnote to the second edition (1879)⁷ that Jevons explicitly reaches it—and even then only as a 'possibility'—his analysis drives him within a hair's breadth of announcing the climax of a momentary general equilibrium solution of individual behaviour in which the utility of expenditure is reconciled in a net maximum with the disutility of acquiring income. But in his main text he is at least clear about the rational and maximising distribution of expenditure across many commodities: no habitual, exploratory or impulsive decision disturbs the complete coherence he describes.⁸

Thus in Jevons we find Economic Man described as a psychological construction and already equipped with all the abstractions so convenient for mathematicians: no bothers about interpersonal interdependencies of utility, no uncertainty, probability distributions noted but forgotten, everything simultaneously calculated, no learning, no forgetting, and time largely conjured away.

Schumpeter remarked of Walras's *Elements of Pure Economics* (1874) that, 'compared with it, most of the theoretical writings of that period—and beyond . . . look like boats beside a liner'.⁹ And certainly it is largely because many read Jevons's lively tract (which he published first) and few outside France and Italy read Walras, that the influence of the former was so great, and that of the latter was so delayed and indirect. The cold remark with which Marshall ended the Preface to the First Edition of the *Principles*¹⁰ may have been a further quencher too: 'it seems doubtful whether anyone spends his time well in reading lengthy translations of economic doctrines into mathematics, that have not been made by himself'. The *Elements* runs to 460 pages in the English translation, which did not appear till 1954, and even the devoted translator Professor Jaffe (who later produced the three great volumes of Walras's *Correspondence*) is impelled to open his Preface by remarking that it is 'expressed in primitive mathematics and then paraphrased in crabbed prose'. Let his shade at least be consoled by the words that

⁶ *Ibid.*, pp. 98–100.

⁷ *Ibid.*, p. 189.

⁸ *Ibid.*, pp. 168–71.

⁹ J. A. Schumpeter, *History of Economic Analysis*, New York, O.U.P., 1954.

¹⁰ P. ix of 8th and 9th editions.

immediately precede Schumpeter's remark just quoted: 'So far as pure theory is concerned, Walras is in my opinion the greatest of all economists'!

Here the relevant point is that throughout this volume we are dealing with Economic Man in his most rigorously abstract state: selfish, rational and well-informed—not completely informed but not encountering continuous change in the extent of his information. The central, and immortal, achievement of these laborious pages is to build up the analysis of Economic Man's operations right through from a static general equilibrium of an individual to that of the entire economy. Walras even pushes on to a 'law of general price movements in a progressive economy' in Lesson 36, containing striking remarks on the comparative statics of growth, on the distinction between technical progress and shifts in the production function, and on Malthus.¹¹

Walras was wholly aware of the fact that his account of individual behaviour was abstract, but in the introductory lessons of the *Elements* he explained its abstraction in a queer terse metaphysical way, related to a classification of sciences. He took economics to be concerned with the relations of humans to things, including the exchange of things against things by men. Relations between human beings were quite another matter—whether they be matrimony, property law or institutions—and belonged not to economics but to ethics. Pure economics, with which the *Elements* are concerned, deals with production and exchange in entire abstraction; applied economics, which was to be dealt with in the second volume of a three-volume treatise he projected, was to take institutions as given; a third volume would deal with the determination of ideal economic institutions, introducing ethics. But somehow in the course of this any empirical question about whether men were in fact selfish, rational and well-informed in their market behaviour got lost—neither asked, nor referred for discussion to another science.

Walras never managed to write the later volumes he had announced—in this anticipating Marshall's parallel failure. But again like Marshall, after his retirement from his chair, he pieced what were mainly earlier writings into two later volumes in their stead: his *Études d'Économie Politique Appliquée* (1898) and *Études d'Économie Sociale* (1896). Rather confusingly the essay that summarises his views on the relationship between 'pure' economics and reality, his 'Esquisse d'une doctrine économique et sociale', appears in the later volume, and is his final summing up. Here he distinguishes 'homo oeconomicus' who maximises his satisfactions by the division of labour and exchange from 'homo ethicus', who has sympathy and aesthetic sense, understanding, reason and free will, both being blended to become 'homo

¹¹ Unfortunately these ten pages included three in which he introduced the theorem of marginal productivity. These have stolen the limelight being erroneously stated and requiring, for their tidying up, the joint efforts of Pareto, Schultz, Hicks, Neisser, Stigler and Samuelson. Another consolation perhaps! (L. Walras, *Elements of Pure Economics*, trans. W. Jaffe, London, Allen and Unwin, 1954, pp. 549–54).

oenonicus'. Pure and applied economics deal with the first, a higher social science dealing with them both. The ideal situation to be rationally demonstrated by the latter (much of it evolved early in his career) is a curious utopia of universal free competition and free trade, no taxes and the state confined to spending the rent of nationalised land. He thought well enough of its world-calming significance to campaign for the Nobel Peace Prize in his last years (though it was given to Theodore Roosevelt instead).¹² This is, apparently, his first explicit use of the expression Economic Man, and he may well have adopted it from Pareto who had, by Walras's own efforts, succeeded to his chair in Lausanne in 1893 and had already, as will be noted below, used the term in his *Cours*, of 1896. However that may be, it is clear that the exact nature of tastes and attitudes, the factors determining these changes (if any) and whether expectations are normally satisfied (other than in profit-directed transactions) are in Walras's view not for economics.

Keynes described Jevons's theory as 'the first modern book on economics . . . simple, lucid, unflinching, chiselled in stone where Marshall knits in wool'. And certainly hunting out what Marshall thought of Economic Man 'in the concealed crevices of that rounded globe of knowledge which is Marshall's *Principles of Economics*' is a most confusing experience.¹³

The crux of the difficulty here is this: in this essay, Economic Man is being considered as a fundamental component of economic theory, and by theory is meant what Schumpeter meant in a passage of his assault on Ricardo: 'Economic theory is not a stock of political recipes, but 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. This engine grinds out results, within wide limits, no matter what the concrete problem is that is fed into it . . . Hence the engine, within those limits, may be constructed once and for all to stand ready for use whenever needed for an indefinite variety of purposes . . .'¹⁴ Now, in Marshall there perpetually struggled for mastery the expert mathematician who delighted in devising such analytical tools; the psychologist who saw beyond the crudities of Benthamite utilitarianism; the historian with a profound sense of the endless flow of social change; the moralist and reformer who wished to preach other than the feelings dominant among his contemporaries; the scientific empiricist who required evidence before using theory on contemporary issues; and the wise practical man content to use commonsense in discussing practical problems when, as usual,

¹² The effort was not so odd as it looks, since, as Professor Jaffe tells us, an economist shared the first prize given only a year or so before in 1901 (*Correspondence of Leon Walras and Related Papers*, ed. W. Jaffe, Amsterdam, North-Holland, 1965, Vol. III, pp. 270 ff.).

¹³ J. M. Keynes, *Essays in Biography*, Vol. X of *Collected Writings*, London, Macmillan for Royal Economic Society, 1972, pp. 131 and 212.

¹⁴ Schumpeter, *History of Economic Analysis*, p. 474.

only a tittle of the data was available, and when, as he felt it his duty, he addressed himself to the serious general reader. His Protean genius displays itself in every form in the *Principles*. The trouble is to find which of them most readers are likely to have remembered after their vain struggle to grasp that slippery, kaleidoscopic and excessive whole.

Marshall detested the concept of Economic Man, and even in his Inaugural Lecture of 1885 characteristically sought to acquit Mill of meaning what he said:

when they spoke of the 'economic man'¹⁵ as governed by selfish or other self regarding motives, they did not express their meaning exactly. For example, Mill says that in economic phenomena 'the psychological law chiefly concerned is the familiar one that a greater gain is preferred to a smaller' and argues that science gets a better hold in economics than in other social phenomena because it deals with motives that can be compared quantitatively and measured one against another. It is this notion of measurability that he really takes as the basis of his work, though he does not sufficiently emphasise it.

And, he goes on, revealing what is perhaps the most deeply felt of his objections: 'Whenever we get a glimpse of the economic man he is not selfish. On the contrary he is generally hard at work saving capital chiefly for the benefit of others. The fact is that the desire to make a provision for one's family acts in a very regular way and is eminently capable of being reduced to law: . . . it is measurable.' His other great objection also appears: '[Ricardo and his followers] regarded man, as, so to speak, a constant quantity, and gave themselves little trouble to study his variations. The people whom they knew were chiefly city men . . . they work out their theories on the tacit assumption that the world was made up of city men . . . their most vital fault was that they did not see how liable to change are the habits and institutions of industry'.¹⁶

In the Preface to the first edition of the *Principles* (1890) he is still more emphatic, and he could, after all, scarcely have chosen a more conspicuous position to be so.

Attempts have . . . been made to construct an abstract science with regard

¹⁵ This, strangely, is the earliest use of the term Economic Man, in the common sense of the term, that I can discover. It appears, but not quite in this sense, in an essay of Bagehot's written in 1876 but not published until the posthumous *Economic Studies* of 1881 (p. 109). The American Henry C. Carey abused 'political-economic man' in his *Principles of Social Science*, 1858. (I owe the reference to Machlup's delightful essay entitled 'The Universal Bogy', in *Essays in Honour of Lord Robbins*, ed. Peston and Corey, 1972, where a number of stimulating quotations are assembled.) Yet the concept itself had been current for at least a half century and had already received the vehemently moralistic denunciations of, for example, Ruskin and Carlyle.

¹⁶ 'The Present Position of Economics', reprinted in *Memorials of Alfred Marshall*, ed. A. C. Pigou, London, Macmillan, 1925, pp. 152-74.

to the actions of an 'economic man', who is under no ethical influences and who pursues pecuniary gain warily and energetically, but mechanically and selfishly. But they have not been successful nor even thoroughly carried out . . . his normal motives have always been tacitly assumed to include the family affections. But if they include these, why should they not include all other altruistic motives the action of which is so far uniform in any class at any time and place, that it can be reduced to general rule? There seems to be no reason . . . If the book has any special character of its own, that may perhaps be said to lie in the prominence which it gives to this and other applications of the Principle of Continuity.

This principle is applied not only to the ethical quality of the motives . . . but also to the sagacity, the energy and the enterprise with which he pursues those ends. Thus stress is laid on the fact that there is a continuous gradation from 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. The normal willingness to save, the normal willingness to undergo a certain exertion for a certain pecuniary reward, or the normal alertness to seek the best markets . . .—all these and similar phrases must be relative to the members of a particular class at a given place and time . . .

Marshall so far honoured this declaration of faith in the relativity of economic behaviour as to include as a very early chapter in the first editions what later became Appendix A entitled the Growth of Free Trade and Enterprise, thirty close-packed pages of history and sociology, ranging from savage life to the present day (themselves the summary of studies that would have occupied six volumes).¹⁷ They trace the emergence of the 'fundamental characteristics of modern industrial life': 'a certain independence and the habit of choosing one's own course for oneself, a self-reliance; a deliberation and yet a promptness of choice and judgment, and a habit of forecasting the future and of shaping one's course with reference to distant aims'.¹⁸

Since these three characteristics are, broadly stated, just the features that define Economic Man (once Mill's exclusion of social affections is abandoned) the reader begins at this point to have doubts about the true strength of Marshall's disbelief in the Jevons-Mill construction. These are alternately allayed and reawakened as he goes on.

They are allayed in the many pages of psychological and sociological description in which physiological, educational, social, moral and historical factors are named as occasioning and changing wants and attitudes, with

¹⁷ See Keynes's Memoir in *Essays in Biography*, p. 210.

¹⁸ Marshall, *Principles*, 8th or 9th ed., p. 5.

endless concrete examples to illustrate the generalities. But at the same time a detailed mathematical account of individual behaviour as a process of utility maximisation is being gradually built up.

Marshall's modern Economic Man, never of course so named, is far from selfish and independent. He has family affections and plenty of social motivations: but these make no appearance in the diagrams and algebra. He is rational and calculating though by no means in the continuous and ever-repeated way postulated in Part II. He has habits and customs and surrenders to impulses arising from them. But 'economics is specially concerned . . . with that side of life in which, when he does follow habit and custom, and proceeds for the moment without calculation, the habits and customs themselves are most nearly sure to have arisen from a close and careful watching the advantages and disadvantages of different courses of conduct'. Marshall agrees that when a habit or a custom grown up under one set of conditions influences actions under another 'there is so far no exact relation between the effort and the end which is attained by it . . . But in business matters in the modern world such habits quickly die away'.¹⁹

With the help of the ninth (variorum) edition of the *Principles*, we can now see with what earnestness Marshall struggled with the issue of whether (in the phrase used here) men were well-informed in their economic affairs, whether expected and realised utilities were to be regarded as equal. He changed his definition of utility in each of the first five editions. In the four earliest there was no questioning that price measured the realised marginal utility of a commodity to its purchasers, but in the fifth he becomes explicit: 'We assume that the resulting satisfaction corresponds in general fairly well to that which was anticipated when the purchase was made', but he then adds a footnote of which the following are the crucial sentences:

It cannot be too much insisted that to measure directly, or *per se*, either desires or the satisfaction which results from their fulfilment is impossible, if not inconceivable. If we could, we should have two accounts to make up, one of desires and the other of realized satisfactions. And the two might differ considerably. For, to say nothing of higher aspirations, some of those desires with which economics is chiefly concerned, and especially those concerned with emulation, are impulsive; many result from the force of habit; some are morbid and lead only to hurt; and many are based on expectations that are never fulfilled . . . The two direct measurements then might differ. But as neither of them is possible, we fall back on the measurement which economics supplies, of the motive or moving force to action: and we make it serve with all its faults, *both* for the desires which prompt activities and for the satisfactions that result from them.²⁰

¹⁹ *Ibid.*, p. 20.

²⁰ *Ibid.*, pp. 92-3.

This odd passage²¹ perhaps permits us to infer that for all theoretical purposes Marshall's Economic Man is well-informed, though not of course omniscient. Nor is there anything in his discussions of the multiplicity of commodities and the lapse of time which prevents us inferring that he successfully maximises across many goods and many years within the limitations of his knowledge.

It may be accepted that in all this Marshall is building up a theoretical Economic Man who can only be used in practice 'with allowances', and that he has his eye throughout on the contemporary issues of Britain, Europe and America. Nevertheless two further points may be noticed, both reinforcing the impression that, so far as the pure theory that he never sharply distinguished from practical discussion is concerned, the Benthamite model was uppermost.

Marshall was not altogether inhibited in making interpersonal comparisons: he allowed a curve of diminishing marginal utility of income (once bare necessities were satisfied) as a description of average experience, and allowed conclusions to be drawn from this generalisation about taxation. Nor did he at all present this conclusion, as more cautious later writers might have done, as a purely political assumption or convention: it was part and parcel of his interpretation of human psychology. The whole world of the 'Old' Welfare Economics flowed from those beliefs. Thus interpreted Economic Man is the foundation of a Welfare State managed by Philosopher Kings and there can be little doubt that Marshall always had an idealistic view of the possibilities of wise legislation from responsible politicians, officials and unofficial leadership.

Secondly, we may note an extraordinary contrast between Marshall's treatment of time in his prose and in his mathematics. Of all great economists he emphasised change most. Not only had he the strong sense of history referred to, but he introduced time in the technical analysis far more explicitly than any predecessor, and the very concepts of the short and the long period are due to him. But in none of his diagrams has time an axis; and if time enters into the argument, as, for example, in the case of durables, the future is briskly disposed of by discounting to the present. Even this, he oddly observes, 'belongs to Hedonics and not properly to Economics'.²² There are no time-sequences whatever in his algebra. In discussing the limitations of the mathematical method he observes that 'many important considerations, especially those connected with the manifold influences of the element of time, do not lend themselves easily to mathematical expression: they must either be omitted altogether, or clipped and pruned till they resemble the conventional birds and animals of decorative art'. In general it can be said that time is ever-present in the prose, but that it vanishes from the mathematical

²¹ An example of what Professor T. W. Hutchison has described as Marshall's 'Pickwickian, almost Humpty-Dumptyish, attitude to his definitions and assumptions' (T. W. Hutchison, *A Review of Economic Doctrines 1870-1929*, Oxford, 1923, p. 75).

²² Marshall, *Principles*, 8th or 9th ed., p. 841.

foundations. It is this perhaps that provides us with the clue to an appreciation of Marshall's attitude to Economic Man.

As an analytical generalisation of conscious economic behaviour, Economic Man—whether in his extreme Near-Omniscient form, or in the more moderate version that allows knowledge to be incomplete though still accurate—is a nonsense. He is one mainly because of the abstraction from learning and forgetting, and from consideration of the time and energy that the preposterous quantity of observation and calculation involved would take. But if time is abstracted from, then the interdependencies of ideally rational economic action can be beautifully presented as a great structure of simultaneous equations capable of indefinite extension: it will be immensely remote from reality in most respects, but it will capture one aspect not otherwise accessible. It will be a first approximation. How remote from reality this first approximation would be Marshall recognised with a fullness of conviction that sets him utterly apart from Jevons, Walras and Mill. He therefore kept this 'engine' under the strictest control, only letting it run when (as with consumer surplus) he believed that it would 'grind out' useful and practical results.

Yet the fact remains that those readers of Marshall—and will it not have been the majority?—who cannot aspire to his 'infinite sagacity' and who require a single all-purpose engine with powerful cutting blades, will have found in the fragments of his elaboration and perfection of Economic Man, despite his disclaimers, just what they wanted—and much easier of access than the interminable pages of Walras.

Pareto repeatedly proclaimed the methodological necessity for an abstract Economic Man as the foundation of pure economics, and the equally imperative necessity for allowing for other types of behaviour when one got to applied economics, and, still more, to issues of public policy. He did so in his first treatise on economics, the *Cours* of 1896–97,²³ and again in his *Manuale* (1906)²⁴ and once more in his vast *General Sociology* of 1916.²⁵ A passage from the last may be reproduced in full, not only as a ripe specimen of the combative style that makes Pareto the most entertaining of economists but because of its uncomfortable relevance to the later argument:

34. Example: Let Q stand for the theory of political economy. A concrete situation O presents not only an economic aspect, e, but the further aspects c, g . . . of a sociological character. It is a mistake to include, as many have included, the sociological elements, c, g . . . under political economy. The only sound conclusion to be drawn from the facts is that

²³ V. Pareto, *Cours d'économie politique*, Lausanne, F. Rouge, 1896–97, Vol. II, pp. 12–13.

²⁴ Pareto, *Manuel d'économie politique*, pp. 17–19 of the French version, reprinted as Vol. I of *Complete Works of Vilfredo Pareto*, Geneva, 1966.

²⁵ P. 20 of the English translation, reprinted New York, 1963.

the economic theory which accounts for e must be supplemented (supplemented, not replaced) by other theories which account for c, g . . .

35. In political economy itself, the theories of pure or mathematical economics have to be supplemented—not replaced—by the theories of applied economics. Mathematical economics aims chiefly at emphasising the interdependence of economic phenomena. So far no other method has been found for attaining that end.

36. Straightway one of those numberless unfortunates who are cursed with the mania for talking about things they do not understand comes forward with the discovery—lo the wonders of genius! that pure economics is not applied economics, and concludes, not that something must be added to pure economics if we are to understand concrete phenomena, but that pure economics must be replaced by his gabble. Alas, good soul, mathematical economics helps, at least, to a rough understanding of the effects of the interdependence of economic phenomena, while your gabble shows absolutely nothing.

37. And lo, another prodigious genius, who holds that because many economic phenomena depend on the human will, economics must be replaced by psychology. But why stop at psychology? Why not geography, or even astronomy? For after all the economic factor is influenced by seas, continents, rivers, and above all by the Sun, fecundator general of 'this fair family of flowers and trees and all earthly creatures'. Such prattle has been called positive economics, and for that our best gratitude, for it provokes a laugh, and laughter, good digestion!

Pareto's Economic Man is Mill's. But he has also, or at least very nearly, Jevons's restriction of his coverage to 'ordinary wants'. 'We shall study' he says in the *Manuale*, 'logical actions, repeated with great frequency, taken by men to obtain goods that will satisfy their tastes.'²⁶ 'Logical' he uses in the sense of calculated. He is careful to admit (and announce his intention of disregarding) exceptions to the general rule that in this case expected and realised consumption sensations can be taken as equivalent: in stupid persons and persons very much lacking foresight. He even notices, and promises also to disregard the 'thorny point' that the temporal order of consumption experience may not be that of consumption purchases.²⁷ Thus his pure general equilibrium of consumption postulates accuracy and complete comparative knowledge. Further, Pareto's model thus has an explicit psychological basis, and that it is false to reality is fully realised. However, when later in the *Manuel* he comes to a long concluding chapter entitled 'Le Phénomène Economique Concret' (which could be translated 'The Real World') the reality of consumption behaviour is dismissed in seven lines. Its reality differs from

²⁶ *Manuel*, p. 145.

²⁷ *Ibid.*, pp. 250-1.

the pure theory 'above all because some consumption is fixed by custom and because among the rest man is a very imperfect balance for weighing *ophelimities*. The equality of weighted *ophelimities* is only achieved more or less approximately.'²⁸ In the remaining eighty pages he chiefly storms at the iniquities of trade unions, protectionists, humanitarians, the cowardly bourgeoisie, and the other phenomena of the modern world that he despised with an uninhibited and aristocratic disdain. What the reader misses is any discussion of psychological points other than those few minimal observations imperatively necessary to derive the mathematics of an abstract general equilibrium from the simplest facts of individual buying and selling. Indeed he went nearly all the way to the purportedly behaviouristic theory of his successors when in the *Manuel* he announced his preference for deriving ophelimity from indifference curves, rather than the other way about,²⁹ and by replacing ophelimity with an index of ophelimity.³⁰

The Reverend Philip Henry Wicksteed³¹ did not believe in Economic Man. He went one better, and believed that the rational maximising mode covered all human activities.

the laws of political economy are but the application to a special set of problems of the universal laws of the distribution and administration of resources in general (whether of money, time, influence, powers of thought or aught else) amongst all the objects that we deliberately pursue or to which we are spontaneously impelled, whether material or spiritual, private or social, wise or foolish. It is intolerable that 'consumption' . . . should continue to stand for the . . . 'actualisings', in conscious experience, of the potentialities to the development of which human effort is devoted. It is the nature of these actualisings, contemplated or realised, that is the supremely significant thing in the life of a man or a community;

²⁸ *Ibid.*, p. 459.

²⁹ *Ibid.*, p. 270.

³⁰ He had already remarked in *Les Systemes Socialistes*, 1902-03, that the system of general equilibrium could be perfectly well developed without using utility at all (Vol. II, p. 287n. *Complete Works*).

³¹ Only chronology can excuse placing Pareto between Marshall and Wicksteed: he cordially hated them both. Anyone with a taste for academic animosities should read his letters to Pantaleoni on the subject, especially pp. 60-6 in Vol. III of the magnificent edition of these letters by G. de Rosa, Rome, 1960. For sheer fury, they are only matched by Walras's exchanges with his colleague Brocher who had unfortunately attempted, with the friendliest intent, to dissuade him from thinking mathematics of use in economics just when the *Economie Pure* was on the point of publication. (*Letters*, 207-9 and 211-13 in Professor Jaffe's equally splendid edition of Walras's correspondence already cited.)

for it is from them that all that leads up to them derives its worth or its worthlessness.³²

Moreover he was not unduly disturbed by the evident absence from the decision-making of ordinary mortals of anything like the mental operations that the solution of huge sets of simultaneous equations apparently entails. It all gets done somehow. The passage in which, before settling down to his interminable arithmetical illustrations, he explains how, is too long to quote in full, but this conveys the flavour:

our scale of preferences often asserts itself automatically. Life would be impossible if we were always in the state of mind professed by the lady who said she liked 'to get up every morning feeling that everything was an open question'. We are not obliged to be constantly considering alternatives, because in a fairly well regulated mind the suggestion of any particular item of expenditure does not as a rule arise until it is approximately in its proper turn and place for gratification.

... if we are moderately wise we pretty generally act without reflection in the manner which reflection would have dictated. But these unconscious and automatic processes are far from being infallible, and one of the qualities most conducive to effective expenditure is an alertness to changed conditions, which reopens every question that has been materially affected by the change, while abstaining from fruitless and fidgeting reconsiderations for which there is either no ground, or ground insufficient to justify the requisite expenditure of thought and energy.³³

This singularly muddled passage is notable for recognising a central difficulty of the concept of rational maximising behaviour rather more clearly than it is recognised in any of the more important writers at which we have glanced. But then Wicksteed wraps it in a fog of words and pronounces it non-existent.

Wicksteed's enthusiastic extension of the rational maximising mode to all human activities naturally leads him to discard any separate concept of Economic Man, and to take a directly superior attitude towards anyone who adhered to this old-fashioned limitation on the range of economic theory.³⁴

It led also, directly, to that now famous new definition of economics

³² P. H. Wicksteed, Presidential Address to Section F of British Association, 1914. Reprinted in *The Common Sense of Political Economy*, ed. L. Robbins, London, Routledge, 1933, Vol. 2, p. 800.

³³ *Ibid.*, Vol. 1, pp. 35-6.

³⁴ He did so in a review of Pareto's *Manuale* in 1906 to the rage of the victim. Pareto wrote to Pantaleoni: 'There is a man called Wicksteed who specialises in writing malevolent, malignant abusive reviews of everything I write', and asserted that he had been put up to it by Marshall who did not deign to attack him himself (*Letters*, Vol. III, p. 65).

announced by his devoted pupil and editor Lionel Robbins in 1932: 'Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses'.³⁵

It is obvious enough from this selective and summary excursion into the earlier history of economic theory that Economic Man meant different things to different people and that any assertion that this or that writer did or did not 'believe' in him needs definition before it becomes meaningful. Before making a few even more questionable remarks about the later history of the idea, it may therefore be helpful to offer some clarifications.

1. It is common to all the authors mentioned (except the last) that the concept is applied to one range of behaviour only, the economic, though this is rather variously and vaguely distinguished from the non-economic.

2. It is common to Jevons, Walras and Pareto that, in the range of activities covered, men are selfish. In none of them is there (so far as I am aware) much recognition of the descriptive absurdities this involves in its apparent disregard of the interdependencies of the nuclear family unit, but one imagines that none of them would have had much in the way of intellectual qualms in regarding Economic Man as *paterfamilias*. What there certainly is is an assumption that his motivation does not include regard for the welfare (or the illfare) of any other agents.

3. In all three the model is psychological, covering thoughts and feelings as well as action, and deriving action from conscious motives and expectations. In all three (4) it postulates rational choice right across the range of economic decision-making, complete comparative knowledge, and (5) knowledge that is accurate probabilistically, on average. Further (6), though chiefly by omission, it depicts tastes constant over time.

For Walras and Pareto the model is explicitly, and in the latter's case, emphatically, recognised to be (7) abstract, not only in its limitation to economic transactions and its omission of the ethical elements embodied in them, but in its omission also of the admitted cases in which men are irrational and inaccurate. In both, this being again recognised most emphatically in Pareto, the factors omitted have to be reintroduced in applied economics. In none is the model arbitrary: it is asserted to be realistic so far as it goes, allowances having to be made only for what is left out when this happens to be significant in reality.

If Economic Man be viewed in this fashion it is perhaps no great libel on the illustrious dead to say that Marshall, despite what he said, 'believed' in him but deliberately chose not to use him in any explicit way. He muffled him up because he wished to be able to discuss at any point he wished time, ignorance, learning, collective organisations, group loyalties, politics, racial qualities,

³⁵ L. Robbins, *An Essay on the Nature and Significance of Economic Science*, London, Macmillan, p. 15.

changes in taste and attitudes, in morals and in institutions, and anything else relevant to social betterment.

Economic Man, by the time Jevons, Walras and Pareto had given Mill's bare definition, if not clothes, at least a hard mathematical skeleton and some shreds of psychological flesh, presented a coherent account of individual economic behaviour. It was sufficient to enable them to argue rigorously all the way from an (abstract) individual to an (abstract) economy and depict the latter as the determinate outcome of the motivations and activities of myriads of agents. But it was an extraordinarily thin selective distorted account of the psychological reality even of merely economic behaviour, as at any rate Pareto and certainly Marshall realised. As we have seen, taken at all literally it would go far towards implying the fantasy of the Near-Omniscient Man described in earlier chapters. If Veblen be affectionately discarded as a sociologist, the first economist to describe its full absurdity, thus viewed, seems to have been J. M. Clark.³⁶ But, to repeat, its creators did not so view it.

Economists will always be torn between their social duty, to be useful as best they can here and now, and their scientific duty, of improving objective understanding of the phenomena they study, for present delight and (maybe) future use—and those, like Pareto who concentrate upon the latter role, will always grumble at those who like Marshall make the opposite choice.

No complaint can be sensibly made at this date about the particular characteristics of the abstract model at which the 'scientists' had arrived with Pareto: it was squarely in the utilitarian tradition out of which most of the social sciences emerged. But it is the duty of scientists to work at the strengthening of the foundations of their explanatory models, and this, it is suggested, is a task at which economists in the last fifty years or so have largely failed. No writer of recognised importance has felt it necessary to seek himself, or borrow from other disciplines, any stronger foundation. Some have been content to identify economics with rational maximisation. Others have buried Economic Man in clouds of mathematics and attempted to remove his psychological features.³⁷

Let us recognise in passing that Keynes, the greatest of economists in this period, but not to be classified among the 'scientists', divined the problem that the 'scientists' were failing to tackle in quite an early paper, the biographical sketch of Edgeworth published in 1926. Keynes remarked of his subject: 'Mill, Jevons, the Marshall of the 'seventies and the Edgeworth of the late 'seventies

³⁶ See his 1918 article, 'Economics and Modern Psychology', reprinted in *Preface to Social Economics*, 1936, pp. 92-169.

³⁷ Though as Sir Dennis Robertson definitively remarked, with due acknowledgment to Mrs Robinson: 'the juice of mentality seems to be uncommonly hard to keep squeezed out—it will keep seeping back even into models of ever increasing dessication' (D. H. Robertson, *Utility and All That*, London, Allen and Unwin, 1952, pp. 21-2).

and the early 'eighties *believed* the utilitarian psychology and laid the foundations of the subject in this belief. The later Marshall and the later Edgeworth and many of the younger generation have not fully believed; but we still trust the superstructure without exploring too thoroughly the soundness of the original foundations'.³⁸

These doubts led on, or so one may interpret them, to the assertion that is the central novelty of the analysis of the *General Theory* (1936):

a large proportion of our positive activities depend on spontaneous optimism rather than on a mathematical expectation, whether moral or hedonistic or economic. Most, probably, of our decisions to do something positive, the full consequences of which will be drawn out over many days to come, can only be taken as the result of animal spirits and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities.³⁹

Again, in 1937:

it was, I think, an ingredient in the complacency of the nineteenth century that, in their philosophical reflections of human behaviour, they accepted an extraordinary contraction of the Benthamite School, by which all possible consequences of alternative courses of action were supposed to have attached to them, first a number expressing their comparative advantage, and secondly another number expressing the probability of their following from the course of action in question; so that multiplying together the numbers attached to all the possible consequences of a given action and adding the results, we could discover what to do. 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 today I believe that our thought is sometimes influenced by some such pseudo-rationalistic notions.⁴⁰

Finally, from the paper entitled 'My Early Beliefs' read to a group of old friends in 1938:

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

³⁸ Keynes, *Essays in Biography*, p. 260.

³⁹ Keynes, *General Theory* (*Collected Writings*, Vol. VII), p. 161. For his own recognition of the importance of this point to his theory, see his defence of his book in 1937 in the *Quarterly Journal of Economics*, reprinted in *Collected Writings*, Vol. XIV, pp. 109-23.

⁴⁰ *Ibid.*, Vol. XIV, p. 124.

the Benthamite calculus . . . which was destroying the quality of the popular Ideal.⁴¹

These are insights eminently destructive of Economic Man, but it is not, I think, wrong to say that they have had no influence whatsoever on the development of the theory of individual economic behaviour among the writers who have dominated 'scientific' and academically well-reputed economics in recent years. It is the peculiar distinction of Professor Shackle that in a long series of writings he has recognised their central importance to economic analysis.⁴²

The writings of F. H. Knight are of particular interest in the present context not only because of their influence upon generations of students who become leaders of the profession but also because, of all academic economists in the past half century, he had perhaps the deepest concern for the problems, methodological and analytical, of the vast overlap between economics, however delimited, other social sciences and ethics.

An essay published in 1922, early in his career, 'Ethics and the Economic Interpretation', states three of his dominating thoughts: (1) that it is impossible to distinguish 'economic' from 'non-economic' motives; (2) that motives are infinitely various and changing, and not subject to law and (3) that economics deals with laws of rational behaviour, and is, because of (2), necessarily abstract. 'If one wishes to study the concrete content of motives and conduct, he must turn from economic theory to biology, social psychology and especially culture history.' He concludes that in the field of conduct there is room for three kinds of treatment: 'a scientific view, or economics and technology; second a genetic view, or culture history, and third, for a Criticism of Values'.⁴³

A further essay, first published in 1924, not insignificantly entitled 'The Limitations of Scientific Method in Economics' clarifies these themes.⁴⁴ The key statements in a section on the scientific treatment of human data are these:

We question the possibility of any prediction which leaves consciousness out of account . . . but we also question whether the formal methods of science can be carried far on the field of conscious data . . . It is possible for a good judge of human nature to form opinions with a high degree of validity as to what individuals or groups are likely to do under conditions

⁴¹ *Ibid.*, Vol. X, pp. 445-6.

⁴² See, especially, G. L. S. Shackle, *Epistemics and Economics*, Cambridge, C.U.P., 1972.

⁴³ Reprinted in his *The Ethics of Competition*, London, Allen and Unwin, 1936, pp. 19-40.

⁴⁴ *Ibid.*, pp. 104-47. I would wish that anyone reading this essay (if even half-persuaded to persist) would here break off and con these two papers of Knight. Even more than the long passage from Pareto cited above, they contain what I am trying to face up to, and every word in them counts.

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present to observation. Moreover, it is possible to convey information and to make general statements regarding the art of judging human nature which have some degree of helpfulness. But none of this is done by methods of science. It is all in the field of art, and not of science . . .

He goes on, a little later:

In spite of all the foregoing, there is a science of economics, a true, and even an exact, science, which reaches laws as universal as those of mathematics and mechanics . . . It comes about in the same general way as all science, except perhaps in a higher degree, i.e. through abstraction. There are no laws regarding the *content* of human behaviour, but there are laws universally valid as to its *form*. There is an abstract rationale of all conduct which is rational at all, and a rationale of all social relations arising through the organization of rational activity (p. 135).

He goes on to point out that, since on this definition economics would be almost all-inclusive, 'economic theory has in practice come to be restricted to the analysis of social interaction and coordination through the price mechanism', and that 'wants are the province of psychology, sociology and ethics'. He concludes by observing that the mass of interrelated data involved in economic studies calls for

three methods of treatment which must logically be sharply differentiated. The first is economic theory in the recognized sense, a study, largely deductive in character, of the more general aspects of economic cause and effect . . . The second division, or applied economics, should attempt a statistical and inductive study of the actual data at the particular place and time . . . at least as much an art based on wide general knowledge and sound judgement as a science with accurate premises and rigorous conclusions.

The third division . . . is the philosophy of history in the economic field, or what some of its votaries have chosen to call 'historical' and others 'institutional' economics . . . this . . . even more than the second [division] is a field for the exercise of informed judgement rather than for reasoning according to the canons of science.

He had earlier remarked of theory that 'it all "works": its conclusions are descriptive of reality and are indispensable in predicting and controlling the phenomena of the physical world'.

What is notable about this is the way in which Economic Man as a rational maximising being is accepted as the basis of theory with full recognition of his unreality and an almost explicit denial of the possibility of starting with any less unrealistic model. There is no suggestion even that psychologists and

sociologists have anything to do in studying the extent of individual rationality in the economic field, let alone economists. In Knight's summary account of applied economics, allowance for any lack of rationality and maximisation is not even mentioned as a factor to be allowed for.

Two extracts from a review article published in 1941 reinforce the picture of Economic Man as still, so to speak, the soul of economics, even the higher-self of economic agents. An eminent anthropologist, Melville Herskovitz, had rashly published a book called *The Economic Life of Primitive Peoples*, based upon a reading of some economic classics and pleading with anthropologists to take economics seriously in their special field of study. Perhaps his understanding of the subject was a little naïf, but one might have thought that an economist would review his book with sympathy. But Knight's reaction was fierce:

The first essential weakness of Professor Herskovitz' opus is . . . the absence of any clear grasp on his part of *any* of the principles in which economists are interested . . . Economics, in the usual meaning, as a science of principles, is not primarily a descriptive science in the empirical sense at all. It 'describes' *economic* behaviour and uses the concept to explain the working of modern economic organisation and also to criticise and suggest changes. It is, of course, of some interest, in connection with the description, to point out contrasts between economic behaviour and actual behaviour, in our own and other culture settings. But the interest in this contrast itself arises primarily out of the fact that the conceptual ideal of economic behaviour is believed to be, at least within limits, also a normative ideal, that men in general, and within limits wish to behave economically, to make their activities and their organisation 'efficient' rather than wasteful. This fact does deserve the utmost emphasis . . .

A little later:

One of the main obstacles to effective cooperation [between social scientists] is the hostility to principles, and specifically to economic principles, which is a universal bias on the part of those who work with the more empirical aspects of social phenomenon. This bias appears in Professor Herskovitz' book in the form (among others) of several rather scornful animadversions on the 'economic man' . . . Now the concept of the economic man is merely an analytical, essentially terminological, device for referring to the economic aspect of behaviour, an aspect universal to all behaviour in so far as it is purposive (or even unconsciously telic, since we can speak of plant economy). The convenience of the concept amounts to necessity . . . Yet the scientific and logical 'morals' of theoretical economists themselves . . . have been so

corrupted by the bias for empiricism in our intellectual *mores* that the term which was current in the literature a century ago, has virtually disappeared from usage even in that specialty.⁴⁵

An obvious difficulty about considering whether Economic Man can properly be said, in however ghostly a way, to lie at the root of the brands of mathematical theorising about economic behaviour that, with the work of Samuelson, have taken over all orthodox economic theory in the last quarter century is that they purport to be behaviouristic theories.

In his first article on the subject, in 1938, Professor Samuelson announced his intention to develop, and celebrated his success in developing, 'a theory of consumer's behaviour freed from any vestigial traces of the utility concept'.⁴⁶

He there analyses 'an idealised individual—not necessarily, however, the rational *homo-oeconomicus*' assuming 'in the beginning as known, i.e. empirically determinable under ideal conditions, the amounts of economic goods which will be purchased per unit time by an individual faced with the prices of those goods and a given total expenditure'. As he puts it in his *Foundations of Economic Analysis* (1947), the 'fundamental assumption' required turns out to be that in these circumstances the individual 'selects that combination of goods which is highest on his preference scale', and this, he observes, 'does not require (a) that the individual behave rationally in any other sense; (b) that he be deliberate and self-conscious in his purchasing; (c) that there exist any *intensive* magnitude which he feels or consults'.⁴⁷

Now Samuelson is passionate for 'meaningful theorems'. A theorem is a 'hypothesis' deserving this adjective 'because under ideal circumstances an experiment could be devised whereby one could hope to refute [it]'.⁴⁸ And since he is a theorist whose scientific papers do not stray into the field of empirical verification it cannot of course be asserted that he believes his theorems more likely to be confirmed than refuted. Cautiously, therefore, let us proceed upon two presumptions about the beliefs and attitudes of the great majority of economists who have been trained in or otherwise accepted the relevance of the refurbished and mathematical economic theory of the kind Samuelson and others have taught—and that will be most of the profession today. These are (1) that they believe this theory, however pure and general it be, provides at least as good a general account of the kinds of real-world behaviour it purports to describe as, say, the pure theory of Walras, Pareto,

⁴⁵ The review was gallantly included as an appendix, with Harsanyi's reply, in the revised edition of his book, now entitled *Economic Anthropology*, New York, Knopf, in 1952, on pp. 508–23.

⁴⁶ P. A. Samuelson, *Collected Scientific Papers*, Cambridge, Mass., M.I.T., 1966–, Vol. I, pp. 3–14.

⁴⁷ Samuelson, *Foundations of Economic Analysis*, Cambridge, Mass., Harvard, 1947, p. 98.

⁴⁸ *Ibid.*, pp. 3–4.

Jevons and even (when he applied such theory) Marshall; and (2) that they 'envelop' the theory's assertions about behaviouristic relationships with beliefs about the conscious behaviour involved in the actions described, depicting it as at least as regular and consistent as these objective regularities. That is, I assume that to them theory is more than a mathematical game and that they believe psychological regularities to determine the regularities of economic action (whatever in turn may determine them).

The crux here is to impute some psychological correlation to the 'fundamental assumption' quoted. How is one to suppose that the agent 'chooses that combination of goods which is highest on his preference scale'? If Samuelson's observation that this does not imply that he behaves rationally in any other sense refers to his non-economic activities—it is not clear what else it can signify—plainly he is right. Equally, he is right that it does not imply that he refers to any intensive magnitude: individuals expect experience from purchases and when they prefer one way of spending \$1 to another, it is the observer, not necessarily they, who may say that they choose the greater subjective pleasure (and he can avoid saying this if he wishes). The central problem is whether he is right in saying that the agent does not need to be 'deliberate and self-conscious'. How, otherwise, can he do what is supposed? We have seen how Wicksteed dealt with this question, but it would be unkind to suggest that anyone would seriously accept his curious theory of subconscious calculation neatly supplemented by a capacity (how operating?) to signal (when necessary) the advisability of conscious thought (and just the optimal amount of it). It is surely inconceivable that anyone chooses the preferred combination without a conscious awareness of his income and the prices he faces, and some conscious imagination of the alternative outcomes of alternative sets of purchases.

The question of the time unit is relevant here. Such a unit was, as has been seen, mentioned in Samuelson's 1938 article though it has slipped away in the chapter on consumer behaviour in his *Foundations*. As one excellent textbook, Henderson and Quandt's *Microeconomic Theory, a Mathematical Approach* puts it: 'the utility-function must not be defined for a period so short that the desire for variety cannot be satisfied. On the other hand, taste (the shape of the function) may change if it is defined for too long a period', adding, though only in a footnote, 'The theory would breakdown if it were impossible to define a period that is neither too short from the first point of view or too long for the second'.⁴⁹ It is entailed in choosing the preferred position that somehow the agent within the time period selected calculates a series of purchases adding up to the preferred collection (even if the temporal order can be neglected as Pareto neglected it). Presumably too if saving is considered at

⁴⁹ J.M. Henderson and R.E. Quandt, *Microeconomic Theory, a Mathematical Approach*, New York, McGraw Hill, 1958, p. 9n.

all the calculation must extend to the multi-period problems later reviewed in that book.

It may be suggested too that besides the mass of conscious rational calculation implicit in this purely objective formulation, something about the accuracy of expectations is implied. The function would not exist if, within the period, there were learning or forgetting, exploratory decisions. Nor could it be of the slightest use as a guide to empirical studies, if (as is to the best of the writer's knowledge not the case) it were ever recognised as necessary to have any provision in the basic model for random or systematic changes in knowledge—in the shape of the preference function—from period to period to allow for learning and forgetting as normal features of individual behaviour. Naturally the possibility of change is recognised but as an occasional rather than an essential feature.⁵⁰ One may infer, it is suggested, that expectation and outcome are tacitly assumed to be congruent in the normal case.

The conclusion drawn by the writer is that, despite the effort to 'squeeze out the juice of mentality', Economic Man is still the elementary building block of current economic theorising about individual behaviour, if not in his near-omniscient form at least in the form which involves probabilistically accurate calculation within the framework of fixed but possibly incomplete knowledge. He is still the theoretical unit for whose deficiencies 'allowances' have to be made in applied (not theoretical) work.

In 1953 Milton Friedman republished (in his *Essays in Positive Economics*) a forceful disquisition on the methodology of Positive Economics which has ever since given rise to a rumbling controversy. Among those who joined in was Samuelson.⁵¹ Summarising, and thus no doubt distorting some very wordy argument, the main point of issue was the importance or otherwise of the 'truth' or 'realism' of assumptions underlying theory. It was common ground that such 'assumptions' could not be exactly true and that the principal value of a theory elaborated from them lay in its capacity to yield predictions that could be tested (refuted or confirmed by confrontation with hard facts). But Friedman had argued (in effect and as he was understood) that the factual validity of the assumptions did not matter much provided that the theory to which they gave rise was confirmed by empirical study. Samuelson was

⁵⁰ The point may be illustrated by reference to another largely mathematical textbook, *Consumer Theory*, by H.A. John Green (1971). He observes that 'since man is a developing animal, a learning animal and a social animal it would be absurd to assume that the preferences of any members of any household remain unchanged . . . we cannot in all conscience proceed without some discussion of three outstanding possible reasons for change . . .' He then goes on to discuss advertising, inter-dependencies with other consumers, and the possibility that price is an independent determinant of preferences. Nothing else (pp. 26-9).

⁵¹ *Collected Scientific Papers*, Vol. II, pp. 1772-78; Vol. III, pp. 761-3.

indignant at such indifference and insisted that a reasonably high standard of veracity in the assumptions was also a requirement for a good theory.

From the point of view of this chapter the most interesting feature of this dispute arises from the implicit agreement of these two distinguished writers (who may surely be said to be the dominant economists of the present time) that an economic theory to be tested at all has to be couched in 'behaviouristic' 'objective' language, that is that scientific economics is coterminous with econometrics, and has no place within it for the conscious psychology of economic behaviour. But agents are conscious, and whether or not their streams of thought and emotion be in this age of scientism held to be amenable to impartial study, thought and action are linked. In their scientific work Samuelson and Friedman appear to me to differ only in their manner of ignoring this link. Samuelson seeks to eject it by theorising in behaviouristic terms, then using 'utility' as a mere mathematical operation. Friedman, heir to Knight's throne in the empire of Chicago (and an editor of the volume of his essays quoted) retains Knight's abstract 'principles of economics' at the back of his approach to econometrics. But the individual psychology of rational maximisation, more or less well informed, implied in both is the same, that of Economic Man.

The actors in this brief tale of the birth, growth and apotheosis of Economic Man are so eminent, and have made such great contributions to our understanding (and our misunderstandings) of the world about us, that it must be with diffidence that any dismissal of their creation is urged. But a century is not long in the history of ideas, true or false, and myths have lived that time before.

Here, about 1715, is Matthew Prior describing their genesis:

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.⁵²

⁵² *Alma*, Canto III, lines 27-38.

Here, in terms even more directly apposite, is Richard Jones⁵³ delivering, in 1831, a verdict on the Ricardian system:

There has obviously been repeated here an error that has been committed so frequently in the pursuit of other objects of human attainment that the very effort of expressing it has become wearisome . . . They have shrunk from the inevitable conditions, the appointed labours, by which knowledge can alone be safely acquired; in their effort to establish general principles, they have quitted too soon the duty of dwelling long and humbly among things, that they might prematurely take up the more fascinating employment of laying down those maxims of imposing generality, which seem to elevate the enquirer at once into the legislator of his subject, and gift him, as if by some sudden manifestation of intellectual power, with an instant command over its remotest details.⁵⁴

Finally, we may remind ourselves that in the same year as John Stuart Mill invented Economic Man, Macaulay assailed his father's *Essay on Government* and observed:

The fact is that, when men, in treating of things which cannot be circumscribed by precise definitions, adopt this mode of reasoning, when once they begin to talk of power, happiness, misery, pain, pleasure, motives, objects of desire, as they talk of lines and numbers, there is no end to the contradictions and absurdities into which they fall.

He concluded his attack with words that, though somewhat inconsistent with the calm here affected, had better be reckoned with:

Though quibbling about self-interest and motives, and objects of desire, and the greatest happiness of the greatest number is but a poor employment for a grown man, it certainly hurts the health less than hard drinking, and the fortune less than high play, it is not much more

⁵³ Marshall's tribute to the Rev. Richard Jones at the opening of his 1897 lecture on the Old Generation of Economists and the New is reprinted in the *Memorials*, pp. 294-5, and he praised him also in his controversy with Cunningham (*Principles*, Variorum Edition, Vol. II, p. 739). It is impossible to resist reproducing the 76-year-old Maria Edgeworth's letter describing him at a dinner party in 1844: 'Here is one whom I am right glad to see—I mean to *Hear* for his is much better to hear than to *see*—for he has an empurpled and embossed face and a nose as large and bursting-looking as a ripe fig largest end foremost—and "spite of all that this can do to make the outward man forbid" no sooner does he begin to speak no sooner does the inner man come out than you forget all about his face nor even see his scratch wig which before you might have marked was a world too small for his great head . . .' (*Letters from England 1813-44*, ed. Colvin, p. 610). One begins to understand why Disraeli, refusing him a pension in 1852, referred to his 'notorious Epicurean habits' (Robert Blake, *Disraeli*, p. 325) and why Whewell, editing his *Literary Remains* (1859) posthumously, explained their fragmentary nature by a reference to his 'habits of social intercourse'.

⁵⁴ R. Jones, *Essay on the Distribution of Wealth*, 1831.

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laughable than phrenology, and is immeasurably more humane than cock-fighting.⁵⁵

⁵⁵ *Edinburgh Review*, 1829. Reproduced in *Miscellaneous Writings*, 1860, Vol. I, pp. 282-322.

12

Positive Economics without Economic Man

The historical sketch of the last chapter is in one way reassuring about the conclusions of Parts I and II but in another raises a question crucial to the discussion of this and the two following chapters.

Having pronounced Economic Man a bad model primarily upon the grounds of his weakness as an account of the conscious psychology of economic agents, it is reassuring to find that, in the form in which he is being assessed here, he was eminently *not* the fruit of careful empirical studies of their conscious decision-making, inquiries successfully completed generations ago and reaching conclusions requiring no questioning now. He was, rather, an abstract and mathematical construction put rather hurriedly together from disparate fragments of earlier social and psychological speculation without serious consideration or even recognition of all the psychological factors from which abstraction was made. He then proved so gloriously fertile in generating wide-ranging deductions that his users characteristically, for more than a century now, refrained from re-examining his postulates. That, when inspected closely, they prove intolerable need not unduly surprise us.

At the same time the account given of the later evolution of the idea of Economic Man brings into question a fundamental preconception of the whole of the argument of this essay so far: the preconception that economics requires a model of the conscious psychology of agents. From Pareto onwards, in various ways, this has been, or seems to have been, denied. Obviously the problems of an economics without Economic Man—the subject of this and the next two chapters—cannot even be approached unless a definite view is taken on this central issue.

Human curiosity certainly includes curiosity about how economic decisions

are thought out (or not thought out) and what their consequences are to human experience. Further, few are convinced that whatever is is right. They think about improving the quality of economic decisions, and the rightness or wrongness of an economic act is a quality of the conscious experience to which that act, by commission or omission, gives rise. Hence economic policy, private and public, inescapably requires knowledge of economic psychology.

In the older tradition economists were uninhibited in thinking these topics within the boundaries of their subject. But academic boundaries are selected for the convenience of students and there is nothing sacred about them. Granting, without hesitation, that thought-processes and emotions are much 'softer' entities than prices, outputs, incomes and other relatively 'hard' entities, let us therefore consider what might become of economics if we sought to eject them from the subject and confine it strictly and firmly to objective magnitudes.

Economics would then become coterminous with econometrics. Its sole aim would be to search for regular relationships between these objective magnitudes. Presumably the ones that it would seek to explain and predict would, as now, be prices, outputs, incomes, but in explaining and predicting them, though other preceding or simultaneous, prices etc. would enter, so would (for example) age, climate, legislation, technology and anything else of an objective character: only the human mind would be excluded. It would be a search for regular quantitative relationships. From the nature of the most readily available material, it might expect to flourish most as a positive science of aggregative phenomena, establishing rules of rest or motion for economies as a whole or parts of it not smaller than industries. But, if it got its data, there would be nothing to inhibit a search for similar rules about firms, households, individuals.

In the pursuit of this science it would obviously be potentially useful to develop hypotheses about the relations to be tested out of speculative imaginings about the thoughts of those taking the decisions that elicit the objective magnitudes. But these imaginings would be merely suggestive and preliminary, to be discarded once the relations imagined were tested. Their psychological truth or falsity would not be a matter within the terms of reference of the science at all.

One may ask first whether such a science would have much prospect of success for its endeavours. This is substantially a question of whether the economic system is such that there exist firm relationships of the kind to which this mode of study is restricted and of a manageable degree of simplicity. (It is not just a matter of curve fitting: with n points a polynomial of the $(n-1)$ th degree will fit exactly.)¹ Obviously no general answer can be given but an

¹ My authority is C. F. Christ, *Econometric Models and Methods*, New York, Wiley, 1966, p. 24.

emphatic judgment was offered by Marshall when in 1901 he wrote, restrainingly, to a then youthful Bowley:

In my view every economic fact, whether or not it is of such a nature as to be expressed in numbers, stands in relation as cause and effect to many other facts: and since it *never* happens that all of them can be expressed in numbers, the application of exact mathematical methods to those which can is nearly always waste of time, while in the large majority of cases it is positively misleading; and the world would have been further on its way forward if the work had never been done at all.²

But he went on to admit exceptions and to hope that more would be found. Let us therefore concede for argument's sake that many firm conclusions could be reached: definite relationships scientifically established, satisfactory representations of ways in which the outcomes of the actions of seething millions of more or less muddled wilful human beings move as if they were parts of some large simple mechanism. Then questions would arise about the uses to which these results could be put by those, now debarred from calling themselves economists, who were interested in the psychological implications of econometrics.

Strictly speaking the economist (New Style) should absent himself from discussions of these questions altogether, or, if admitted to explain his definitions, units, aggregation procedures etc., he should then be silent. Professionally he has no qualification to discuss states of mind and in the seriously conducted confabulation being supposed would hold his peace about them. The psychological implications of the econometric results would be drawn out by the other kinds of scholar present, economists (Old Style) now renamed economic psychologists, sociologists or something of that kind, who (as respectable scientists) would speak with such authority as their own separate knowledge of the relationships between objective acts and subjective experience warranted—and no more.

While of course opening up economic psychology as a distinct discipline, and calling for much inter-disciplinary collaboration, such an arrangement would be, in principle, a possibility. But it would surely (a) be inconvenient and in view of the legacy of the past, it is surely (b) impracticable.

(a) It would be inconvenient in that the econometrician who is pictured as preparing his hypotheses after quite casual psychologising (then discarded) would be denied the opportunity of using serious psychology as a means of selecting good hypotheses or of discriminating by its use between several econometric results statistically as plausible as each other. It would seem more fruitful to regard econometrics as a sub-branch of a general economics including economic psychology and applying its conclusions to obtain a particular kind of result in appropriate cases. Even were econometric results

² *Memorials of Alfred Marshall*, p. 422.

all that interested us (and they are not) that would be the more efficient arrangement.

(b) It is impracticable in that for a century economists have taken a wide view of the scope of their subject, have been accustomed to pronounce on issues with a psychological content, and have been expected by a widening and ever more influential audience to do so. It would be altogether unlikely that some neat methodological ukase would stop them doing so. (After all old style economics is constantly peeping out from new style economists.)

The conclusion suggested, therefore, is still that adumbrated in Part II: what is necessary in the face of the inadequacy of Economic Man as a psychological model is, not to remove psychology, but to seek a better account of it.

It may add some force to this to suggest the efforts made to render economics a behaviouristic science, though partly motivated by the desire to use the methods of the physical sciences, may also have a recognition of the psychological inadequacy of Economic Man as another impetus. But the devices of disguising him as a mathematical axiom or of purporting to use him as a merely transient device for suggesting econometric hypotheses seem to the writer to have failed, and in that failure to be much responsible for present discontents with the state of economics.

Once we take it as axiomatic that any action taken must be the preferred alternative among a number considered, it is humanly impossible to avoid constructing an 'as if' psychology for the agents whose actions we observe. Their actions 'reveal' preference maps, even measure their utility functions. Without in any way inquiring how they actually thought, we construct imaginary Economic Men applying imaginary efforts of thought to imaginary preference patterns. We argue back from act to thought, entering a Looking Glass world where all is weird. If at the same time others, believing in Economic Man as a genuinely psychological model, are arguing from guesses about the operation of that model, arguing (that is) from thought to act, total confusion reigns.

Similarly once an econometric conclusion has been reached on the basis of relationships suggested by pure theorising in terms of a population of Economic Man—however aggregative the relationship—it is immensely tempting to suppose that the econometric result somehow confirms the psychological validity of the theorising, to infer that the population was indeed composed of Economic Men with the particular tastes and knowledge exhibited. The inference is absurd, but if the inquirer knows more about abstract Economic Men than about the real flesh and blood individuals whose aggregative objective behaviour he has reduced to equations it may be irresistible. This inferential Economic Man may strike him as quite plausible.

Follies of these kinds would be the harder to commit if we had models to work with that were based upon genuine psychological investigations.

Granted this need, it can still be questioned whether economists should share in the investigations or leave them to psychologists (or such of them as he can find who have not retreated into behaviouristic psychometrics) and take over his results from them. It seems certain that he should share. His objective, a simplified account suitable for his own special purposes, could scarcely be obtained to order.

The inquirers might well at the outset cheer themselves with the thought that their fellow human beings have been communicating their thoughts and emotions to each other, for the use and delight of their daily lives, for some hundreds of generations now and often successfully too. There is something somewhat silly about deciding in advance that no empirical inquiries by careful students among normal persons about the ways in which they tackle their most frequent activities could elicit usable generalisations.

Furthermore economics deals with adults in part only (and one of the duller parts) of their lives, and the positive economist's jobs being to explain and predict acts and their consequences to experience his main need is to know *what* the decision-making processes of agents are rather than *why* they are what they are. Certainly if they are changing all the time, through learning and forgetting, he will not get far with his central duties without also being able to generalise about the proximate sources of these changes unless he can say from whom new tastes, new techniques, etc. are picked up. But the psychology he requires will be one that appears very superficial to those who think they can appraise the deepest springs of action, the significance of intra-uterine and paulo-post-uterine emotion, True Freedom, Man's Place in the Universe and all that. The economist who fears finding something worse when he abandons the Benthamite nanny to whom he has clutched so long, reduced to a poor skeletal axiom though she be, does not have to rush into the hot embraces of Freudians, Jungians, Existentialists, Marxists or any other school of hazy omniscience.

What have to be sought are models of the conscious economic behaviour of individuals that are simple enough at once to permit generalised analysis of economic events over time and to be applicable to the testing of such analysis in particular situations. They have to be constructed from materials which consist of observations of such behaviour and these have to be made over a sufficient range to prevent the part from being taken for the whole and the exception for the rule. We must not, as did the creators of Economic Man when they observed that some rational and well-informed choices are made in limited circumstances, 'quit too soon the duty of dwelling long and humbly' in the minds of ordinary agents.

To pretend here to know enough of economic realities to be able to produce models alternative to Economic Man would be merely to repeat the intellectual sins to the detection of which so many laborious pages have been devoted.

The proper gospel to proclaim here would be, undoubtedly, that economists who believe that their subject is more than econometrics should set to work in collaboration with psychologists at the task of constructing some better model or models than Economic Man and that meanwhile they (like the econometricians) should with proper diffidence (and perhaps some penitence too) abstain from pretending that they know more of experience than those untutored in their delusive tradition. All too often when economists are brought to admit that their reasoning attributes an intolerably exaggerated amount of well-informed and rational behaviour to the agents under discussion, they promptly announce their intention of persisting in this error until some better model is provided (without raising a finger to find it). This is one of the few testable propositions in this essay and the reader may test it on his neighbours—and himself. Is not the correct retort here that the true scholar, recognising error, confesses his mistake and retreats from assertions until he knows better?

Nevertheless rather than leave the matter on that lofty note of self-righteous scepticism, perhaps some timid and extremely tentative prophecies may be ventured about the possible outcome of these still almost non-existent studies.

1. It is likely to prove impracticable to have a single model to describe every agent's decision-making even at one time and place. The Marshallian Principle of Continuity is too hard to handle in this context. The weak human intellect, in model-building as elsewhere, must impose discontinuities in order to get a grip on things. We must be prepared to think of a community as containing a mixture of types, and hope to get away with very few. The changing proportions of these types may be of the greatest importance in long-term explanation forecasting and planning.

2. It will prove right to go back to the distinction, made in Mill's Economic Man but blurred in Jevons's, between man as a business-enterprise, a wealth-seeker, or money-maker, and man as a private person, a vessel containing a flow of economic pleasures and pains (not all the first in consumption or all the latter at work). Men operate at both levels but make their decisions at them in different ways. Attempts at maximisation of monetary totals may retain a large place in the 'business' rules (for some types at any rate) but utility and its maximisation will be largely removed from the rules of 'private' decision-making, retained at most in little patches.

3. The model will have to have a biographical framework, describing not only the educational state of the agent at the moment of his entry to the workforce, but the normal development of his decision-making procedures in his adult life.

4. With respect to the business rules it might prove possible to distinguish no more than two types, the Inert and the Active. The former, once they have first chosen an occupation and an employer stick with them, rarely considering

change and needing large and obvious inducements actually to make changes; they let their incomes be largely determined by agents in whose appointment they play little part; they work for hours and conditions that are habitual or only changed by such agents; such savings as they do not make incidentally to the purchase of consumer durables or put in a box, they leave others to handle, etc. The Active are vigorous money-seekers, calculating, alert, mobile throughout the greater part of their business lives. Except that they would have to be provided with a psychology of decision-making in conditions of true uncertainty they would not be far from conventional entrepreneurs. Given some rules (from private behaviour) of aggregate consumer demand, a market economics quite close to what we have in the Keynesian system might well persist, enveloping, supporting and where necessary restraining economics *pur sang*.

5. Only much fainter guesses yet can be risked about the model or models that might emerge to describe the economic psychology of 'private' life. It is in thinking about this range of affairs that any economist must find his imagination most inhibited by his years of drill on the unearthly parade ground of Economic Man. Another obstacle, by no means confined to economists, is that private habit of self-justification, that interminable rewriting of memory which deludes us into unwarranted but comforting convictions of past rationality. Conceivably a model that abstracted from any real efforts at the precise planning of future private experience and any really critical appraisal of the past, any truly independent learning, would be found to be adequately simple and applicable and not too abstract. In it adult private action and experience would be basically determined by sets of habits installed by education, but they would be modified by ageing, by the regular imitation of recognised 'betters', and by standard reactions to circumstances (such as income and price changes) that make more repetition impossible. Economic Man abstracts from our stupidities: this would be a model that abstracted from our cleverness—a less severe abstraction. This might be described as culturally inert behaviour, and would account for the transmission but not the origin of new kinds of final experience. It is tempting to think of a supplementary model for the culturally active minority who create, who set new standards, whom those who are imitated have themselves first imitated. It would very much close the system. But this would be to imagine rules for the discovery of the as yet undiscovered, which is surely as vain an ambition in the field of primary and secondary knowledge as it is in that of technical knowledge. It is here surely that attempts at determinate explanation break down: we are at the fringe of affairs where we can record but not explain or predict.

It would be the aim of such studies to discover usable models, models that could be applied to actual situations and provide predictions or explanations with which the realities of such situations could be compared and, often, a

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recognisable congruity discovered. It is eminently to be desired that at least the objective facts of whole economies at single 'moments' could thus be approached. It is equally to be desired that much longer periods could be tackled (though secular historical explanations or predictions must be dismissed out of hand). Thus far the ambitions of neo-classical theory are here fully accepted: it is only the performance of Economic Man in the central role of attempts to achieve them that has been rejected.

Whether a reconstituted body of economic theory, one with models tied far, far more closely to psychological truth than their traditional predecessor, could achieve these aims I do not pretend to know. It is conceivable, though regrettably, that the deductive/objective strength of any such models would prove too weak to generate the long chains of analysis that are required to predict the affairs of a whole economy at one 'moment', still less over a period of years. Then, if we persisted in the desire to conduct economics with as much as possible of the careful methods of science as we can, there would be nothing to fall back upon but econometrics, and that failing too, the last resort would be common sense. But why assume these battles lost before they are fought, or even planned? Once we break out of the Enchanted Castle of Economic Man we may find that we can, after all, if we try hard enough (and resist the temptation to premature mathematisation), cope with reality, replace myth with science, hold our heads up again.

13

Normative Economics without Economic Man

A Private Behaviour

In this and the following chapter some of the implications to normative economics of ridding the subject of the preconceptions that derive from a belief in the near-validity of Economic Man as a psychological description will be briefly explored. Traditionally normative economics has been identified almost exclusively with the science or art of public policy and to this the argument comes later. But one of the consequences of discarding Economic Man is that the normative problems of private economic behaviour become more interesting than—to judge by the extent to which they neglect them—contemporary economists believe them to be. In the present chapter that proposition will be elaborated.

'Normative' is a euphemism for 'moral' or 'ethical'. For several reasons modern economists have become more and more shy of crossing the boundary which divides this realm of discussion from that of the positive.

1. Those who interpret positive economics in behaviouristic terms have to keep out unless they are prepared to go through the intervening science of economic psychology to get at the normative. Under almost any moral code 'good' and 'bad' are qualities attached to states of mind, and, if attached to acts, are attached by reason of conscious intentions or consequences.
2. Even positive economists who still include economic psychology in their definition of their subject share with the behaviourists (and any other scientists) a faith that events are determinate. But ethics postulates free will: it is a science of the criteria of free choice. The economist moralising comes up against ancient and unsolved riddles about where determinism stops and free will starts. He sails in a fog between the Scilla of impracticable romanticising and the Charybdis of sluggardly cynicism.
3. Economists are decently aware that they can take no expert part in debates

about the ultimate issues of ethics, about the nature existence and prescriptions of the final authorities for specifically ethical judgments, God, Conscience or Society—and they know too that on these matters the experts have reached no agreed conclusions after millennia of vigorous and often violent debate.

4. Partly (no doubt) because he is their baby and they have a natural prejudice in his favour, partly for sound ethical reasons, they think of Economic Man as morally quite respectable and are indisposed to enter debates with strident critics who do not understand him as well as they do. This last point may be amplified.

The conventional Economic Man is rational, more or less well-informed, and selfish in his economic behaviour. So far as I know the first characteristic has not been subjected to moral criticism: it is no part of the economist's business to consider whether men can or do reason too much in non-economic matters but it seems rather desirable than otherwise that they reason carefully in the economic. There certainly seems no moral objection to being well-informed, though there are problems (to which the argument comes later) about whether men should seek to be even better informed than they are. It is the 'selfishness' that has come in for almost all the moral criticism to which the concept has been subjected. It is, of his three defining features, also the one that has been least discussed in this essay and it may conveniently be faced here.

No economist, for generations now, who has argued on the basis of Economic Man, even without knowing it, has interpreted 'selfishness' in the extreme sense of 'absolute selfishness' distinguished in Chapter 7 and used in Mill's original essay. He is allowed to be concerned with the welfare of his immediate family and (presumably) a few friends. Thus far he is not only sufficiently realistic (for many societies) for this one of his three defining features to have been excusably little discussed so far in an essay about him, but also, surely, virtuous. It is the failure of his social motivation to go beyond that narrow circle that comes in for moralistic objurgations (and is liable also to 'positive' qualification).

Economic Man's lack of concern for the outer world, it may first be noted, does not *only* imply that he does not let desire for their happiness influence his economic actions: it also denies him a concern to hurt them. He is not a soldier of the Rising Race or of the Class War, gloatingly happy for the sake of the cause as he kills off the fuzzy-wuzzies or the capitalists. He is independent and respects the independence of others, and if some moral effort is required to attain this aspect of his indifference, it is not obviously evil. The standard moral objection relates, of course, to the other aspect.

Dives will be pushing independence and self-respect altogether too far if he leaves Lazarus unrelieved, and Lazarus commits no sin if he accepts relief. Upon that at least almost all moralists will agree. Yet even here economists

have traditional arguments in extenuation of the heartlessness of Economic Man. There is the harsh Malthusian proposition that, in some circumstances, help to the indigent of this generation (of the wrong sort) will do no more than multiply the number of the miserable in the next. There is then the milder case that if the rich be left free vigorously to accumulate capital, even from the most selfish motives, Lazarus's children will find themselves living in decent comfort as a result—and that this will not happen if Dives spends too much on immediate charity. That these arguments are thoroughly offensive to the tender-minded moralist does not detract from such positive force as they may possess. Properly qualified and applied they are part of the facts of the situation with which the more useful kind of moralist must cope before he preaches. (The other kinds who demand that we should all always act for the greatest good of the greatest number, present and to come, or that we should totally submerge our wills, in economic and non-economic affairs alike, to the dictates of the Fuehrer, the Great Leader, or the Central Committee are here taken as belonging to the impracticable kind.)

There is one final argument that, as I see it, may excuse the normative economist from much complaint about his model's selfishness. He may concede that this selfishness is excessive, that it requires remedy on moral grounds, and that the heart of man is not so irremediably black that no remedy is possible. But he can argue, convincingly, that in modern communities the state has assumed administrative responsibility for handling, through a vast range of policies of which the state is by far the most efficient of executants, the major issues of social justice between contemporaries and between this and succeeding generations. Hence, he can argue, the moralist can most effectively address himself not to the private economic behaviour of individuals but to the same individuals in their political role. Certainly if (as however we ceased to require of him at the end of Part I) the wealthy Economic Man were as calculating in his politico-economic as in his private economic life, he would often have already accepted progressive taxation to finance social services of every kind as a matter of selfish necessity. However, the moralist concerned for Dives's virtue should urge him to be not only a peaceable but a good citizen, not only accepting but encouraging such public policies. If Dives does that he may continue to be an Economic Man, such social motivations as he *should* still display in his private life mainly belonging to its non-economic side.

These points do much to explain and even justify the large measure of neglect which contemporary economists have accorded to the normative problems of private economic behaviour. It is only in rather recent years that a growing recognition of the importance of technical progress and of human capital has turned their attention to the fact that Economic Man, though he may calculate

thoroughly—have complete comparative knowledge—characteristically calculates on the basis of incomplete knowledge. We have been reminded that he is not near-omniscient. Hence there has developed an economics of learning which has probably to be classified as just within the boundaries of a normative economics of individual behaviour. But it is only a fragment of the subject that might appear in these boundaries if economists abandoned their belief in Economic Man.

The corollaries of this abandonment would be the recognition that comparative knowledge also is not complete—that many, if not sometimes the bulk, of men's economic decisions are habitual, impulsive, exploratory; that their other categories of knowledge are not merely incomplete but constantly changing; that their information is not often even probabilistically accurate, but downright erroneous and very often strictly uncertain; and that their division of time and effort between their economic and non-economic activities is often not subjected to any effort at rational planning. Much might happen if we shifted our preconceptions about private economic behaviour from a belief that it is not quite omniscient to one that it is not quite ultra-stupid. Should this view of private economic decision-making be confirmed by empirical studies of the purely positive sort, and if it be agreed that it is within the uncertain range of free will that men could, if they felt it right, attempt to behave more like the model, then large questions are opened up for discussion. Should they try? And what would happen if they did? The first is plainly an ethical question (probably not to be answered until the second has been) and as such the economist can keep away. But at least he may claim to share in the discussion of the second.

If it be accepted for argument's sake that the maximisation of net utility flows is meaningful and morally desirable, one rather neat general solution to the theoretical problem of how far a man should go in his efforts to achieve this end can be (and one rather suspects would be) suggested by believers in the powers of reason. It draws into the argument implications of the undoubtedly valid observation that to most mortals the labour of research and calculation is, beyond a point, painful, or at any rate less pleasant than alternative activities.

Treating the labour of thinking out the most efficient program of action as an investment cost, it could be argued that the optimal course is to push it along to the point at which the marginal disutility of the last unit of effort is equal to the present value of the additional future utilities gained by making this last unit of effort, probabilities allowed for. This does not require that before he starts the agent is anywhere near the point of awareness of all the relevant knowledge available in his community, or that he is near the thorough calculation of Economic Man. Nor does it require that he attain these blessed states at the end of the day. He is only to become as well-informed and as

calculating as his market situation, his intellect and imagination and his subjective attitudes to work permit. He is to struggle towards the light of Near-Omniscient Man but with efficient rationality to stop short if that light be too remote. He is to have his being only in the outer circles of the paradise of reason but to get as close to the centre as he can.

Unfortunately the conditions for this procedure to be practicable are not met. There is no general prescription that when a lazy ignorant or mistaken man starts poking into the cupboard where new truths (and new errors) may be stored he finds nothing but relevant truths arranged in descending order of size. Were this so then indeed he might rationally decide at some point that the labour of looking yet further in is not worth the possible discovery.

Moreover the metaphor of the cupboard in itself suggests an over-simplified picture of the real problem. He faces a row of cupboards of unknown facts—about his own emotional potential, about the market, about technology, about the immediate and the long-term consequences of different consumption patterns, about different types of work, about the consequences of his economic actions to other people (and of theirs to him), about the division of his life between economic and non-economic activities—and each of these large doors merely covers rows of little doors on the dusty way in. Thus the mounting pain of investigation may indeed be fully recognisable to him but the successive gains from fresh thoughts will be random (and some may be repulsively negative). He has no logical basis for deciding when to stop, how hard he should try to be fully rational and fully informed.

If the economist abstains from moral pronouncements he thereby abstains from pretending to know what marks God, Conscience or Society will award any particular act or any particular patterns of acts and their associated experience. But he had better also abstain from any confident belief that he can judge them on purely amoral, utilitarian, grounds, saying that this is more pleasant than that to all normal persons. He may say this as a mere report of the honest opinions of a sample of persons from whom he has inquired, but not more. He has to admit that he is not himself a Near-Omniscient Man, even of the utilitarian variety, and that those from whom he gathers his opinion may not be accurate 'all the way' in what they tell him. This brings him back very close to the status of a positive economist studying private behaviour. The latter describes the varieties he observes, generalises from them, and traces as best he can the factors likely to change them. Proceeding normatively he may do no more than push these generalisations under the noses of his audience and at his least intrusive, invite them to consider whether, if one of these caps fits, it fits comfortably, and whether, if they do not fit, there is any other headgear they prefer.

Even a procedure as modest as this might be productive of interesting results. The original sin of self-justification *post hoc* and, perhaps, a century or

more of the propagation of the notion of Economic Man, flatter most of us into the belief that we are much more rational and well-informed than we are. We know little of the economic lives of those outside our own little circles and might be much startled by the report of a cool observer of that. We might change our ways: though whether we did so for good or ill would be for the moralists to pronounce.

But however shy the normative economist may be, very properly, of preaching, it is surely not unlikely that sufficient of what he sees would be recognisable as systematically erroneous, even by the moral standards of the agents he is dealing with, for him to be able to go further and positively to identify their errors and ignorances. The technical expert advising on instrumental acts has no inhibitions in the matter, and though a much more gingerly approach may be warranted in the discussion of final acts and the ways in which men in fact approach them an entire abstention from criticism by normative economists would be overdoing it.

What economists attempting, on the foundation of a sound positive knowledge of local economic *mores*, to make constructive criticism would find to offer in discussing poor and undeveloped countries must be left for those with such knowledge to contemplate, but this chapter may be concluded with some comments on comments made by three of the greatest of British economists on economic behaviour in an advanced and advancing economy.

John Stuart Mill presumably had unnecessary stupidity rather than idiocy or vice in mind when in 1848 he remarked that the 'pitiful vanity of being known to possess [riches] or the still more paltry shame of being suspected to be without them [were] the presiding motives of three-quarters of the expenditure of the middle classes'.¹

Marshall, never so offensive and less sweeping, was still firm in 1890:

the power of rightly using such income and opportunities, as a family has, . . . is rare in all classes. Perhaps £100,000,000 annually are spent even by the working classes, and £400,000,000 by the rest of the population of England, in ways that do little towards making life nobler or truly happier. And, though it is true that a shortening of the hours of labour would in many cases lessen the national dividend and lower wages: yet it would probably be well that most people should work rather less; provided that the consequent loss of material income could be met exclusively by the abandonment by all classes of the least worthy methods of consumption; and that they could learn to spend leisure well.

But unfortunately human nature improves slowly, and in nothing more slowly than in the hard task of learning to use leisure well. In every age, in every nation, and in every rank of society, those who have known how

¹ J. S. Mill, *Principles of Political Economy in Collected Works*, Toronto, Toronto University Press, 1963- , p. 810.

to work well, have been far more numerous than those who have known how to use leisure well.²

Then there is Keynes, meditating in 1930, in his essay on *Economic Possibilities for our Grandchildren*, and assuming for argument's sake an eightfold increase in the material standard of living in a century:

Now it is true that the needs of human beings may seem to be insatiable. But they fall into two classes—those needs which are absolute in the sense that we feel them whatever the situation of our fellow human beings may be, and those which are relative in the sense that we feel them only if their satisfaction lifts us above, makes us feel superior to, our fellows. Needs of the second class . . . may indeed be insatiable . . . But this is not so true of the absolute needs—a point may soon be reached, much sooner perhaps than we all of us are aware of, when these needs are satisfied in the sense that we prefer to devote our further energies to non-economic purposes. . . . If the economic problem is solved, mankind will be deprived of its traditional purpose.

Will this be a benefit? If one believes at all in the real values of life, the prospect at least opens up the possibility of benefit. Yet I think with dread of the readjustment of the habits and instincts of the ordinary man, bred into him for countless generations, which he may be asked to discard within a few decades.

To use the language of today—must we not expect a general 'nervous breakdown'? . . . there will be ever larger and larger classes from whom problems of economic necessity have been practically removed. The critical difference will be realised when this condition has become so general that the nature of one's duty to one's neighbour is changed. For it will remain reasonable to be economically purposive for others after it has ceased to be reasonable for oneself.³

Such statements by such writers (and many of the parallel statements made by others later) are not to be brushed aside as exhibitions of the culture-snobbery of middle-class intellectuals. They raise issues in the normative economics of private behaviour of obvious magnitude. But when one attempts to find the common elements in them and to express them in the terminology of this essay there are difficulties.

A general positive proposition seems to underlie them all: that, in the kinds of economy being considered, men are biased towards economic and away from non-economic activities by comparison with the division of his time and effort that would be made by a Near-Omniscient Man who was selfish and amoral (a utilitarian without social motivations and disbelieving in the existence of special valuations placed by God, Conscience or Society). However,

² Marshall, *Principles*, p. 720. See also pp. 136–37.

³ Keynes, *Essays in Persuasion, Collected Writings*, Vol. IX, pp. 326–31.

the positive explanation of this could be any of three features in the thinking the critics ascribe to them. (a) They may have a moral code which commands them to seek more wealth than without it they would: it is presumably Society in its metaphysical sense that would have to do this to them, since God or Conscience would surely command more charity than they are being supposed to exhibit. (b) They may be supposed to have a social motivation, to be seeking the prestige associated with wealth and fleeing the contempt assigned to poverty. (c) Without either a moral or social motivation, they may simply be seeking wealth in the belief that those wealthier than themselves are happier than they.

Granting the general proposition, various alternative normative judgments could be being advanced by the critics, according to the particular explanations of it that are being offered; (a) could only be contradicted on ethical grounds, by denying the existence or validity of Society's demands; (b) could be attacked either for ethical or factual reasons. Men *ought* to repress this social motivation: they *ought* to be independent and self-respecting (and certainly they should not exult over the poor). Or it could be denied that in fact others have the feelings agents acting in this way ascribe to them; (c) again could be attacked on both grounds. The fact that the rich are in a utilitarian and amoral sense better off might be admitted but reproved by some variety of moral asceticism. Or it could be denied that as a matter of fact they are so. Men, it could be said, are simply mistaken, inaccurate, insufficiently calculating, foolishly greedy.

There is thus a tangle of factual and ethical issues behind this tradition of criticism. It is a tradition too strong for normative economists to ignore, as those will ignore it who confine the normative to matters of public policy and who tacitly or inadvertently proceed as if men were not only Economic Men in their private economic lives but in effect of the near-omniscient variety as well. The issues in question include some that are doubtless insoluble but they can be limited and discussed and, it is to be hoped, clarified with the prior assistance of careful observation.

The search for the morally right or amorally efficient division of men's lives between the economic and the non-economic may well be regarded as too grand a quest for the mere economist to claim as his own. In that inquiry he can hold no more than a watching brief. But within the economic, however that be delimited, he surely has a duty to perform.

It would be in line with the moral scepticism of many of the great economists of the past for him at least to assume for argument's sake that Society imposes no moral obligation upon men in wealthy societies to pursue yet more material wealth for Society's sake, and that, given dutiful political behaviour, he has no private economic duty to conjure up a social motivation to please or displease his neighbours by his affluence. Indeed he may assume that they

should repress such a social motive if they have it, postulating an individualistic morality in private life. Perhaps too (as I for one would guess they would) positive inquirers might find that such motives are in fact rare and that upon closer inspection social 'prestige' is sought chiefly as a confirmation of the uncertain dictates of private self-respect, a more acceptable motive. Then, also disclaiming asceticism, the problem to the discussion of which his efforts would chiefly be devoted would be that of whether in their decision-making they do in fact—however they make their decisions—arrive at as pleasant economic lives for themselves and their families as they might, and, if not, how they might do better.

The dangers of this activity were noted by Schumpeter:

This tendency of the social philosopher to exalt his own schema of life's values into an ethical norm . . . runs through the whole economic literature . . . Marshall, for instance, had a very definite conception of the Noble Life . . . It does not take much trouble to realise that this conception was shaped on the model of the typical life of the Cambridge professor. Tastes, pursuits, levels of comfort widely different from it, he at best viewed with indulgence but without ever embracing them with full understanding.⁴

The remark is perhaps a little unkind to Marshall, though the general statement is unquestionable. Yet it might well be that, were there adequate empirical studies of the economic decision-making and realised experience of normal persons to start out from, economists (and their readers) would be able to escape this just but displeasing verdict. If we discovered the full extent to which the subjects of such inquiries were *not* Economic Men, and the extent of the ignorance of economists who assume that they are, the profession's tendency to casual moralising from conviction of superior knowledge might be inhibited rather than encouraged. Once it had adequately sunk in that conventional welfare economics is a meaningless scholastic fantasy, that the private lives of those who are not tied to the satisfaction of basic physiological needs throughout their waking hours wander largely lost in a sea of habit, impulse, exploration, learning, forgetting, uncertainty, and inaccuracy, there would be much to unlearn, much to be surprised at, and to discuss. That there might be little to prescribe would scarcely matter.

B Public Policy

The discussion of the normative aspects of private economic behaviour in the last section encountered the obstacle that it is very logical for the true believer in Economic Man to be convinced that the subject can scarcely exist. Only men's selfishness is left open to serious question and that inquiry can properly be left to the clergy. The problems of most interest to the economist in this

⁴ *History of Economic Analysis*, p. 129.

part of normative economics only emerge when we abandon the presumptions that they are rational and well-informed. To me it is distinctly odd that in turning to the other part dealing with public policy no similar obstacle is found, indeed quite the opposite. In Part I, it was plausible to suppose that if men behave like Economic Men in their private lives they will do so likewise in their public, and when this is worked through in a general and speculative historical analysis there is much to confirm the inference. It would have been natural for the theorists of general equilibrium to have included the political market in with the private markets and to demonstrate that the Statute Book and public interventions in the private market are phenomena as determinate as those of the private market. They could well have drawn the same conclusion that is implicit in their neglect of the normative economics of private behaviour: that it is only the morals brought to the political market that can be criticised. In fact only the Marxists, determinists believing in something like an Economic Man tempered by class loyalties, argue along these lines, and it is only recently that their political economy has begun to creep into the main stream of thinking about policy, still trailing clouds of self-righteousness and hate.

Nevertheless it is convenient for the purposes of the present chapter to suppose (a) that believers in Economic Man as a sufficiently true image of private behaviour could logically treat the problems of public economic policy on the basis that policy should be formed to meet the requirements such men would lay upon their rulers, and (b) that the role of the economist is to advise rulers of the legislation they should in consequence enact. We can then consider how far their policies might need to be modified in the light of the fact that men are not of that kind.

Policy is so vast a field that the discussion here, as so often before, must be exceedingly compressed and general. We will roughly divide policies into those concerned with the efficiency of the economy, and those concerned with social justice, equity between persons.

That it is a vulgar error to suppose that the classical economists, who may mostly be said to have believed quite strongly in Economic Man, drew the policy-conclusion of *laissez-faire* from their belief has been definitively shown by Lord Robbins in his *Theory of Economic Policy in English Classical Political Economy*. They were entirely aware of the theoretical arguments for various kinds of specific public intervention in the market outcomes of a population of Economic Men required in the interests of efficiency. An ever-multiplying flow of rigorous theoretical analyses has extended the list ever since. The list will vary with the exact definition of efficiency used, with the extent to which transactions-costs, and the costs of collecting information are allowed for and how, but (to put the matter broadly) interventions to preserve perfect competition or simulate its outcome, and to deal with many

kinds of 'externality', favourable or unfavourable, and to provide public goods may be said to be generally acceptable in principle to the most vehement believers in Economic Man.

Much of the controversy among economists of this general persuasion about the propriety of translating these theoretical prescriptions into practice turns on issues that belong to politics rather than to the exact nature of the model of private economic behaviour being used.

1. It is one thing to identify a practical instance in which the theory of intervention applies. It is another for the legislators and administrators to translate the prescription into exact legal and quantitative terms.

2. What the theory suggests should be maximised, say, the national dividend may not at all be what the politician wishes to maximise, say, his effective support. Economists are prone, in the absence of a positive science of political economy, to be somewhat naive in the ideals they propound, and those who are more cynical may proclaim it better to put up with imperfections in the efficiency of the economy than to encourage politicians to remedy them.

Over the last thirty years most of the enormous extension of particular interventions in the economy that governments have come to make can and have been justified in terms of refined analyses postulating Economic Man and in terms of such general economic ideals as efficiency and growth. That the results have been so little pleasing as they seem to have been may partly have been due to an insufficient regard by the electorate to these arguments for not attempting to instruct such dubiously well-informed agents to apply refined theory about simple situations to the coarse reality of much more complicated ones. But the trouble may go deeper than that.

If we abandon Economic Man the intellectual foundations of modern welfare economics evaporate. Normative economics is all to do again, and unnumbered *suggestiones falsi* have to be undone. Away goes consumer's surplus. Away go all those exercises in the flourishing pseudo-science of cost/benefit analysis in which 'revealed preference' is the trick for quantifying the unquantifiable. The task is urgent. Whatley, 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'⁵—and in much recent work on policy Economic Man is on the march. But it is exceedingly difficult to guess in what ways economists equipped with a more 'positively' acceptable model would amend their prescriptions.

It is clear that Keynesian policies of aggregate demand management in the interests of full employment would not need to come under scrutiny. They depend upon an analysis incorporating true uncertainty and for that reason alone represent the one great break in the tradition of belief in Economic Man

⁵ Whatley, *Introductory Lectures on Political Economy*, 1832.

that has so far occurred. (This indeed explains why this analysis has been so much resisted by true believers.) But that break was made mainly in respect of the determination of the instrumental acts of investment, and was not extended to the range of final decisions (though there is a hint of this in the essay on the future quoted in the last chapter). The real puzzles for policy arise when it is recognised that in this more intimate area of behaviour men are less rational and less well-informed, more habitual, imitative, uncritical than they might be.

At first sight the conclusion might seem to be that the state should be altogether more uninhibited in its present modest efforts to promote the kinds of higher enjoyment that men are too lazy and ignorant currently to attend to sufficiently, and more repressive of their foolishly wasteful and greedy ways; that economists should urge more public splendour, more promotion of the arts, far more town-planning, more national parks, more noise- and stench-prevention and so forth. Certainly it is to me its failure in these kinds of policy that has so paradoxically made the age of affluence the ugliest and least creative age of all. (At least for this belief there is the evidence of preferences revealed by a vast tourist industry taking more of us every year to see the relics of more indigent times before they vanish under highway extensions.) But then, of course, we come upon (a) the positive question whether the electorates we have could be persuaded to pay taxes for these things, (b) the further positive question whether any contemporary rulers could have the tastes of the Medici and the Esterhazys, and (c) the normative question whether these values are indeed as satisfying to others as they are to the middle-class intellectual.

In an address given in 1907 Marshall neatly contrasted two views that economists might take on these problems:

In Adam Smith's time government was corrupt, and though he himself, like all his chief followers, was unselfishly devoted to the well-being of the people, experience had taught him to look with suspicion on those who invited the government to new enterprises for the public weal: for their real motive was generally to increase their own gains, or to provide easy and well-paid posts for themselves or their relatives.

But:

Government has now many new large and subtle resources for finding out where it can do more harm than good . . . and it has a much increased power of putting into operation any decision at which it has arrived. And the people are now able to rule their rulers, and to check class abuse of power and privilege, in a way which was impossible before the days of general education and a general surplus of energy over that required for earning a living . . . [This] very enlargement opens out so many and so

arduous new public duties that no Government . . . can nearly catch up with the work that is specially its own . . . So I cry, '*Laissez-Faire*: let the State be up and doing', let it not imitate those people who have time and energy enough to manage their neighbours' households, while their own is always in disorder.⁶

The dilemmas involved become the more serious and the more vague the less we are convinced that the theory of Economic Man provides a neat delimitation of the possible grounds of intervention. There are problems here that are unamenable to cost/benefit studies.

There are two initial difficulties to be surmounted in making any remarks about the implications of abandoning Economic Man to the thinking of economists about the second of the two main classes of public policy distinguished here—those about social justice (here narrowly confined to distributive justice). One is that the concept of justice is in this context at least a moral one and questions of morals lack definitive answers. The other is that however one may interpret 'rightness' in connection with distribution some inter-personal comparisons of economic welfare are almost certainly involved and upon the practicability of such comparisons believers in Economic Man have been deeply divided. In the older tradition culminating in Marshall and Pigou such comparisons were held to be, in appropriate circumstances, fully possible; from the later, of which Pareto is the tutelary genius, they are utterly debarred as scientific statements.

It has to be remembered here too that, whatever economists may think about it, the problem of distributive justice is *par excellence* the central and most divisive issue of domestic politics in poor countries as in rich (and becoming equally so in international politics). Any influence they may have in this noisy warfare, verbal and otherwise, will depend on their arguments being such as to strengthen or weaken the already strong passions of the contestants. These are certainly not well-informed, or rational, and may often not be altogether selfish either. Many of their arguments have been picked up from economic writings and many of these writings have themselves been prompted by current political controversy outside the theorist's study.

Three assertions may be made with some confidence about general public opinion regarding the main facts relevant here:

1. Most people believe that economic welfare is a quantifiable concept; that, with allowances for hours and types of work and for family size, it is closely and positively correlated with income; and that it is comparable between persons who are, by and large, uniformly susceptible to its enjoyment.
2. Most people will agree that it is morally wrong that anyone should be in

⁶ 'Social Possibilities of Economic Chivalry', reprinted in *Memorials of Alfred Marshall*, pp. 332–46. (The second sentence, considered in relation to the political theory of Part I, confirms the adage that 'it is all in Marshall'.)

gross economic poverty while others are affluent and that the state is properly engaged in tax-financed relief of such suffering.

3. Beyond this minimal area of agreement upon the morals of distribution there is a wide spread of disagreement about the desirability of more equality than would prevail without further redistributive measures.

In so far as the effects of the views of economists upon these policy controversies are concerned, their private disputes about interpersonal comparisons may, it is suggested, be disregarded. Whether the professional students approve such comparisons or not, they will be made by the voter; they may be warranted as an accepted political or social convention whether or not they are scientifically valid; and their legitimacy can be vaguely inferred from the high degree of physical uniformity within mankind even if no psychological uniformity is directly observable. Far more significant is the belief that men are rational and mostly well-informed in their economic transactions.

That men are usually greedy for ever more material goods when they can be obtained without excessive toil is a vague generalisation of the truth of which no expert investigations are required to persuade any one. It is equally indisputable that they are prone to self-justification, to applauding their own successes (whether their own efforts, accident or others most contributed) and to blaming anyone but themselves for failures. But that in so proceeding they are rational and well-informed, and that there is a rising quantity of some entity called economic welfare that accompanies success and is reduced by failure are supportive rationalisations contributed by academic doctrine. They would disappear with the disappearance of Economic Man.

The belief that extreme poverty involves deep suffering of kinds that vanish at higher income levels is a truth readily acceptable and a sufficient basis for making its relief a duty to others (subject to the possibility of validity in some grim Malthusian argument). Whether men with incomes above that level, and already getting and spending them with near-omniscience, would lead better lives were those incomes increased is unknowable. But could a serious effort be made to describe and communicate accounts of the economic experience of persons who actually exist, and could we consider how those lives might be altered (a) by mere increases in income and (b) changes in established practices of decision-making of various kinds, then there would be a subject for more responsible discussion. There would be some chance, if not perhaps of much agreement, at least of the discussants finding their own views on the relative desirability of efforts, political and other, to increase income and efforts to lead more calculating or adventurous private economic lives. Is it not entirely possible that many would conclude that the latter would be the more rewarding course?

It is my own guess in the matter—and it is only honest guesses that can be offered in speculative essay—that except in relation to incomes in the close

neighbourhood of extreme poverty 'economic welfare' is barely conceivable as a quantity, and that at higher levels if conceivable at all it is only very loosely indeed (if at all) correlated with income. If there be good political arguments for policies to achieve ever greater equality of income and wealth, after gross poverty is attended to, they are not economic arguments and they do not rest on moral injunctions to have a social concern for the economic welfare of others.

Incidental consequences of the theory of Economic Man have been that it is taken to sanctify the imitative material greed conventional in many advanced economies, and to justify (especially when associated with explicit belief in a declining schedule of the marginal utility of income) an almost paranoid obsession with the distribution of income and the proper progressivity of the tax system. The rising levels of political and industrial unrest, and inflationary chaos, that afflict these economies (and, it may be added, the preposterously over-elaborate and wasteful tax systems they suffer from) can at least in some measure be attributed to this theory.

Though he would have the celebrated peroration to Keynes's *General Theory* to encourage him, it would naturally be absurd for anyone to blame academic model-building for too many present discontents. The rich feared and despised the poor and the poor hated and complained of the rich long before Economic Man was thought of and will doubtless do so when he is only remembered as a curiosity of intellectual history. Nevertheless the harm that this doctrine may have done to normative economics private and public by the suggestion of false conclusions and the inhibition of search for difficult truths is not to be neglected.

It may be helpful to end an argument that has wandered at length and often no doubt in circles with a brief recapitulation and restatement of its main theme.

This has been an essay about the adequacy for their intended purposes of the long accepted elements of modern economic theory: the assumptions, postulates, axioms, beliefs, that in their economic behaviour men are self-regarding, rational and well-informed, and that the central structures of economic theory can be erected upon the model of Economic Man.

Such a discussion presupposes a view of the functions of theory in a social science and there is sufficient variety of views now current to make it desirable to repeat the one here taken. It is one that, so far as the writer can make out, is old-established and quite conventional. Theory is a set of assumptions out of which a structure of abstract argument is then built up. These structures are abstract in two senses. One is equivalent to 'general': they do not contain a prefatory definition of the exact range of their practical application but this is vaguely supposed to be wide: for example they are about all normal men and not just a Tom, Dick or Harry known to the theorist, or about commodities in general and not just food or clothing. They are also abstract in the sense of not purporting to embody all the factors entering the determination of the events the argument predicts, but only as many of the most important of them as the complexity of deductive argument permits the theorist to handle with logical precision. Abstraction in the sense of generality is clearly a virtue in a theory: it allows the investigator to apply it to a wide range of phenomena. Abstraction in the sense of omission is a fault, though often (because of the number of factors involved in reality and that weakness of human intellect) a necessary fault.

These are commonplaces, but questions of interpretation arise.

1. It can be debated whether the descriptive truthfulness of the postulates is

[Conclusion]

of any importance at all compared with the truth of the predictions which theory deduces from them and the applied economist tests. In some natural sciences this is not even a question that can be usefully asked: the physicist cannot peer into his molecule to see whether it really looks like a miniature solar system, the zoologist cannot ask his rats whether their purposive activity involves the conscious thought that alone justifies the use of the concept of purpose in his model of rodent behaviour. But in the case of economic theory the question can be asked and some vague answers obtained. The view taken here is that the descriptive truth of the postulates of Economic Man is important for distinct reasons connected with concomitant views on the role and scope of theory.

2. Were economic theory to be solely employed in suggesting the objectively observable and measurable variables and forms of quantitative relationship between them that the econometrician is to test; were theory then to be wholly discarded; and were no use whatever to be made by anyone other than econometricians of the results obtained (general economists, psychologists, sociologists, policy makers, historians); and were econometricians resolutely to abstain from any interpretation of their conclusions suggesting anything whatever about conscious human experience—then indeed the truth of the postulates about conscious behaviour involved in their theory would be indifferent. But this has never been, is not yet, and, in my view, never should be the way economic theory is used. Both for positive and normative purposes econometric conclusions have to be interpreted in terms of the conscious psychology of the agents concerned. Whether or not economists are to be concerned with that interpretation—and it is to my mind as absurd to deny them this right as it would be to claim they have sole command of the subject—somebody must study it, for delight and use. Any mythical ‘as if’ psychology that was useful for econometricians must be consistent in its predictions with an empirically observed psychology of the determination of the same events: and why use fairy tales in a social science when truth is at all accessible? And for that matter, why attempt to impose on econometricians a kind of academic celibacy, a more than monastic seclusion, of which they are demonstrably incapable?

3. Furthermore, it is by no means self-evident that the casual brief unsystematic observations of individual psychology from which Economic Man was constructed must necessarily have suggested the best sets of variables and relationships for statistical investigation. Unless that model of decision-making happens to be a good account (however simplified), more serious and systematic psychological inquiries might suggest better ones.

4. Finally, whether or not this be so in the experimental natural sciences, it is the merest academic romanticism to suppose that economic theory exists only to be tested in a scientific fashion, and never to be used for any practical purpose until this is done. The economist who is to be of any use to the

community that employs him, whether he likes this or not, must expect frequently to see largely untested, depressingly hypothetical analyses based on economic theory used for purposes of the greatest importance to society. These must, in the nature of things, be drawn from a simplified view of behaviour, but it must be the least crude simplification that he can devise and it must be possible, in its practical use, to incorporate some rough allowance for the omitted factors. If this theory is radically defective it will often be impracticable to graft these allowances on to it and men will be unable to extricate themselves from its false suggestions.

Thus it has been supposed in this essay that among the tests of merit for a set of theoretical assumptions we have to include not only their capacity to engender plausible hypotheses over a wide range of application but also the quality of being, so far as they go, descriptively true, and convenient for applications in which abstracted factors are allowed for. It follows that in a merely speculative discussion (such as this) of the adequacy of Economic Man explorations can be made in two opposite directions: outwards into the possible extent of his explanatory power over events and, as it were, inwards into the plausibility of the account offered of the way he determines these events. (Or, if you wish, up into the largest structures that can be built upon him, and down into the detailed composition of the foundations upon which they are to stand.) Part I went off in the first, Part II in the second direction.

It is at first sight rather strange and to be regretted that, in building up arguments about the economy as a whole out of postulates about the behaviour of the individuals in that economy, theorists have stopped so far short of describing states of the economy that are in any way realistic. It must be rare indeed that any economy has ever been at all close to stationary equilibrium, and as rare that one has been in a steadily expanding state with all factor supplies and outputs increasing at the same rate and all prices and incomes steady. But for decades now such constructions have been the most elaborate theorists have explored, and these they have explained in wearisome detail, rarely allowing for more than two factors and two commodities and never for the state. Yet if Economic Man be an applicable model, it must be possible to derive abstract arguments from him which cover the almost universal real-world facts of life that real historical sequences cannot conceivably be simplified down beyond the three factors which even the earliest classics admitted, all changing at different temporal rates, with relative prices also changing. And given the postulate that men behave like that in the private market, it is surprising that economic theorists have been so slow to cope with the implications of parallel behaviour in politics. (Economic historians have never been so shy.) If Economic Man is a model that fits market facts of a moment even approximately the theorist has a duty to see whether he also fits historically plausible sequences.

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The miniature substitutes for such neglected labours set out in Part I proved startlingly suggestive of the proposition that, by the test of the amount that he can explain at the level of first approximation, Economic Man is a good model. One could scarcely ask for more than an outline of the main trends of universal economic history. They were confessedly argued loosely and it is clear that, in devising rigorous versions of them, the devotees of rigour would have at least to relax (and why not?) the requirement of satisfied expectations in investment transactions. Yet it seems by no means unlikely that if anyone wished, he could, with only minor modifications to Economic Man, build strict models much less flagrantly unhistorical than theories of balanced growth.

The insufficiency of this test became gradually clear in Part II. The requirements for the postulates of Economic Man to be even remotely true as descriptions of human psychology turn out to be utterly excessive. It is only, just, imaginable that adult men could think in such a fashion in economic conditions of extreme and bare simplicity and in those (we may be sure) they rarely have been educated up to such a pitch of knowledge and imagination. For the conditions of most societies it is simply unimaginable that they could ever be fulfilled and equally unimaginable that the most enthusiastic student could concoct a detailed account of what the life of anyone in whom they were fulfilled would be like.

It is a simple and (surely?) obvious conclusion that economists should abandon this startlingly absurd construction and cease to use it as the foundation for most of their theoretical work. But it is well to be clear why this long-standing myth which has had so great a role in the development of economics should, in the writer's view, be scrapped.

It is not that it is unrealistic: to repeat this yet again, a theoretical model in any of the social sciences must be that to some extent because the full complexities of human nature defy description. It is rather that the simplifications involved in the definition of this one are not only too numerous and important, but then do not succeed in yielding an end product that is, in psychological terms, simple at all. It is thus useless as an instrument of psychological economics.

There is no mystery about how economists first came to their belief in Economic Man, and the story was briefly sketched in Chapter 11. To J. S. Mill he was an abstract entity primarily concerned with the acquisition of wealth: man engaged solely in the instrumental acts of production and investment, pursuits in which the rational well-informed modes of thought may well be frequent. When single choices in the field of final expenditure came to be considered, a Benthamite calculus in terms of utility rather than money was available as an exact analogy; and when the obvious examples drawn from everyday expenditure on simple necessities were used in illustrations it was

plausible. For the mathematically-minded the step from partial equilibrium to general was, intellectually, a small one but with immense consequences to the scope and power of the abstract analysis. What went so largely unnoticed (Marshall always excepted) was the contrast between the mathematical step and the psychological one: it is one thing in algebra, quite another in terms of the agent's streams of consciousness. Furthermore, analysis confined to a point in time naturally abstracts from change, and so the obvious facts that men are continuously learning and forgetting went unnoticed or disregarded too.

What is much more puzzling is that in the last half century economic theorists, and, in large measure, applied economists too have retained this 'extraordinary contraption' as the basis of their thinking, as the tripod of postulates upon which they seat themselves to prophesy. A concatenation of factors, only partly distinguishable, seems to provide an explanation.

There has been the ever-increasing specialisation of the social sciences. It has become a little improper for the economist to peer over the organisational boundary that separates his little plot from his neighbours'. It is almost as bad form for him to think about psychology as it is for the psychologist to raise an eyebrow at the ideas the economist seems implicitly to have about the mind. At the same time it has also become, if not bad form, at least an eccentricity that the economist should write in such a language as might attract or interest an audience in which common sense is held in higher respect than it is among academics: mere 'laymen'. (Bacon observed an earlier episode of this kind:

it is the property of good and sound knowledge to putrefy and dissolve into a number of subtle, idle, unwholesome, and (as I may term them) vermiculate questions, which have indeed a kind of quickness and life of spirit, but no soundness of matter or goodness of quality. This kind of degenerate learning did chiefly reign among the schoolmen: who having sharp and strong wits, and abundance of leisure, and a small variety of reading, but their wits being shut up in the cells of a few authors . . . as their persons were shut up in the cells of monasteries and colleges, and knowing little history, either of nature or time, did, out of no great quantity of matter and infinite agitation of wit spin out unto us those laborious webs of learning which are extreme in their books . . . cobwebs of learning, admirable for the fineness of thread and work, but of no substance or profit.¹)

The social sciences have split up into tribes, and in tribal groups scepticism about totems is *mal vu*.

The pursuit of rigour in theory—in itself, the worthy aim of getting the logic watertight—requires mathematics. The prestige of mathematics (a language opaque to most of the population) has led to the now almost universal practice

¹ *Of the Advancement of Learning*, Book I, IV, 6.

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of stating theoretical arguments in this symbolic form. It is a form distant indeed from the part-verbal part-pictographic part-emotional language in which agents in fact conduct their making of decisions. The High Priests, and the acolytes streaming behind them conning their textbooks, have come to disdain, and their dupes to have no time for, that translation of the hermetic into the everyday which is necessary in questioning the realism of Economic Man. The psychological impossibilities packed into Samuelson's fundamental axiom are simply unnoticed. (Indeed the apparent absence of any psychological connotations may be treated as improving the purity of the deductions.)

The rise of econometrics, promoted by the multiplication of statistics and the development of labour-saving devices for their analysis, and requiring difficult skills (among which psychological sensitivity is not included) has deflected attention from the psychological foundations: the econometrician has no need to know of them.

Lastly, many economists, bred in the broader traditions of a liberal, individualistic, and would-be rational society, have kept a sneaking moral respect for the postulated behaviour of Economic Man. (And who would not rather be admired by Bentham than Mao Tse-tung?) When there seems no pressing necessity to do so, and the task is hard, we are all indisposed to probe into the practicality of the ideal.

A general theory is a tool, not a necessity of life. It is possible to tackle the questions that come up one by one with bare hands and mother-wit. If the only tool available be a bad one, obscuring the vision of its user and damaging the material, this may be the best that can be done. But to get far in the infinitely tangled world of economic affairs, it is obviously better to have one that (in words omitted from the quotation from Bacon just given) 'worketh according to the stuff and is limited thereby'.

In its destructive aspect this Essay has been little more than an argument that Economic Man is a tool of the first and not the second kind. Sadly, however, it has not been possible in the last three chapters to do more than peer in the direction in which there will have to be made those large constructive efforts needed before a better instrument can be found and used.

The task that has to be performed is to reposition the deductive structure of economic theory upon a better fundamental unit. What is required is an account of individual decision-making that is derived from empirical observation, and less likely to mislead, than the 'extraordinary contraption' that the mathematicians have concocted. It has been one of the tragedies of the development of economics in the last half century that a blinkered subservience to this totem has led to an almost total neglect by economists even of the possibility of such observations and of their central relevance to the concerns of the subject.

To devise an alternative to Economic Man out of the casual observations

and introspections of any single writer would be merely to repeat the sloppy procedures of his inventors. What are needed are serious, subtle, prolonged and ample psychological studies of the private (and public) economic behaviour of many agents, of different ages, incomes, and educations. But to the writer at any rate it would seem more than likely that any model, sufficiently general and as necessary abstract, to be of much use would have to provide for habitual as well as calculated decisions, for decisions taken in the face of true uncertainty, for learning and forgetting, and regular patterns of change in tasks, and modes of decision, from one time unit to the next.

Such a fundamental unit is still to find. Nothing in the earlier discussion would suggest that it would much affect the vision of the momentary state of the economy as the resultant of the usual forces of supply and demand. But their determinants change; the presumption of generally satisfied expectations would disappear; and in any deductive theory of sequences of states there would be far more to allow for than in economics composed of Economic Men. And, as has been argued in the last two chapters, normative economics would become a much richer field for study.

An economics without Economic Man is a far more difficult subject than one with it. The search for truth in the chaos of human realities is a more uncomfortable task than the spinning of cobwebs of learning in academic seclusion; much messier, much less neat. It makes much heavier demands on the integrity and cool-headedness of the student, and he will lose that respect for incomprehensibility which he now so regrettably enjoys. But he might become an altogether more useful citizen and more truly a scholar.

Appendix: Some Recent Discussions of Economic Man

As noted in the Preface, during the year in which this essay was being mumbled over by publishers, no fewer than four books covering much the same topics as it does were published.¹ None concentrates with quite the single-minded (even obsessive) concern displayed here upon the propositions that economists should discard Economic Man and search, through empirical studies, for a more acceptable model of individual behaviour as a basis for theorising. But one or both of these conclusions are implicit in them all. This puts me in a difficulty.

In a reading lifetime of fifty years a man can, at a guess, get through 5,000 (or so) of the 15,000,000 (or so) books that are said to exist—two a week with an annual fortnight off. It would be patently absurd to suggest that these five will be among the 5,000 best for anyone, and as absurd (and insufferably insolent as well) to hint that this one should be among the two or three about the elements of theorising that even the most dedicated theorist would wisely tackle. Readers must choose what best meets their needs; authors, aware of the difficulties of rational choice and guilty at adding to them, should give what help they can. With my superego struggling to contain a revolting id, I offer the following short notes for their assistance.

1. Loasby: *Choice, Complexity and Ignorance; An Enquiry in Economic Theory and the Practice of Decision-Making.*

A Professor of Management Economics places a beautifully lucid account of the concerns of 'industrial and organisational economists' in the context of

¹ Another, published in 1975, may be mentioned for its title: Hollis and Nell, *Rational Economic Man, a Philosophical Critique of Neo-Classical Economics*. It recommends, on the basis of *a priori* knowledge, a brand of theory, cruelly labelled Classical-Marxian, in which 'firms and consumers are not mentioned; only industries and social classes are shown'.

general economics. In the latter he takes—and whom better could he take?—Marshall, Keynes and Shackle as his preferred guides, and in consequence his views on revealed preference, mathematical general equilibrium analysis *et hoc genus omne* are close indeed to those of this essay besides being adorned with excellent quotations. The economics of the private individual are not his concern and he does not much bother himself with (rise, or sink, to) theorising about the economy as a whole.

2. Leibenstein: *Beyond Economic Man, A New Foundation for Microeconomics.*

Professor Leibenstein explains that 'although playing intellectual games seems reason enough for [his] research', serious purposes also had a role: 'the most important impetus towards writing this book is to find a theoretical solution of what might be called "the X-inefficiency problem"'. He holds that beyond 'allocative inefficiency' (tariffs, monopolies, government subsidies etc.), there is, his own term, 'X-inefficiency' which covers all other types. The former he believes to have been measured in many econometric studies and to have been shown to be of trivial magnitude, but the latter, also measured in many productivity studies and recognised on sight by visiting experts, is altogether larger.

Since 'X-inefficiency' would seem by definition to be the loss of output or 'welfare' due to (most of) the ways in which men fail to be perfect Economic Men, selfish, rational, maximising and (if not what I call Near-Omniscient) at least as well-informed as the most expert American, the author's program plainly entails discussion of many of the topics covered in my essay.

He is, rightly, insistent on the importance of starting from individuals ('atoms') rather than the households and firms ('molecules') and upon enriching the traditional model of Economic Man. He develops an 'S.R. Man', a selective-rationality man who chooses how rational to be, rationally, of whom Economic Man (who possesses 'complete constraint concerned "calculatedness" in the pursuit of precise objectives') is a limiting case. 'Constraint concern' or 'purposiveness' is a 'vector of personality traits' of which a 'not exhaustive' list are degrees of '(1) constraint concern, (2) calculatedness, (3) realism of context assessment, (4) independence of judgement, (5) non-reflexibility of assessments, (6) magnitude sensitivity, (7) non-deferral of decisions and actions, (8) learning from experience'. All these have ordinal values from zero to one. He has a 'central postulate: people behave the way they like, or they behave the way they feel they must or they make some compromises between these elements'. Hence a diagram with 'constraint concern' along one axis, 'pressure' up the other, on which are drawn individuals' concave 'id-indifference curves' and convex 'standards of behaviour' curves, tangency points determining the behaviour selected.

From this starting point Professor Leibenstein proceeds to discuss many issues concerning the behaviour of individuals in families and firms in a

remorselessly theoretical style with a forest of diagrams, a spatter of neologisms and acronyms, topped off with a Mathematical Appendix.

It is my impression that much of his analysis is vitiated by the implicit assumption, contested in this Essay, that Economic Man can be meaningfully described in all his details and in every application: that he is usable as a standard of reference. (Certainly the statistical studies into allocative and X-inefficiencies mentioned in his introductory chapters appear to involve this assumption.) Hence the theorist can add any complications or make any adjustments he wishes, and Professor Leibenstein's concern is to illustrate *seriatim*, using the expository devices of equilibrium analysis, a large variety of situations excluded by the postulates of Economic Man, but which he (and I) believe to exist.

Professor Leibenstein is a most difficult writer and I may misunderstand him. But his numerous insights into the deficiencies of Economic Man do not, for one reader, come into focus as a coherent alternative foundation for economic theory. It is also very noticeable that at no point does he suggest that empirical inquiries into the psychology of individual decision-making would hope to tether his speculations down to reality.

3. Scitovsky: *The Joyless Economy, An Inquiry into Human Satisfaction and Consumer Dissatisfaction*.

This extraordinarily rich and wide-ranging book straddles my restricted essay in every dimension. I plead for Economic Man to be discarded: Professor Scitovsky threw him away before he started. I plead for collaboration with psychologists to find a better model: Professor Scitovsky believes the physiological psychologists already to have such a model, just waiting to be directly applied to economic affairs (a model not confined to conscious experience but related to physiology). I hint, with much diffident generality, that if equipped with respectable models economists would find much to question in their habitual preconceptions about the normative aspects of private and public life: Professor Scitovsky has swept on to a whole set of large answers.

Professor Scitovsky observes in his Preface that 'much of what I am saying is tentative, incomplete, often subject to qualification and open to question. But if we are to make any progress with this vital subject, someone must risk the voyage.' He makes it with the most brilliant courage, and anyone travelling with him has an exciting time. Nevertheless those who see the progress of economics as requiring a long-sustained and patient accumulation of well-established elements will feel many hesitations as they race along with him. His book is, above all, a sermon against the American Way of Life: this is the title given his second and longest Part, and the chapter headings are *Is our life too good? Is it too dull? Our Puritan Ghost, Our Disdain for Culture, What's Wrong with Mass Production? What's Wrong with Specialisation?* He reaches the morality he preaches—one highly sympathetic to myself—via a psychology as far different from that of Economic Man as you could hope to find, and

via a fine display of statistical material. But, perhaps pardonably in a pulpit, he is, by strict standards, rather casual about solidity of evidence. There are rather too many rats in his psychology for my comfort. He attaches significance to the Nordhaus-Tobin estimates of aggregate National Income, Non-Market Work, and Value of Leisure, though unless we are all Economic Men—and perhaps even then—they are surely meaningless in human terms. He devotes a chapter to respectful comment upon the Survey results of asking thousands of people at intervals whether they are Very Happy, Fairly Happy or Not Very Happy. Worse still he uses correlation of these answers with those to simultaneous questions about income as evidence.

I venture the conclusion that, while this book is certainly within the 5,000 referred to above, other discussions of the elements of economic behaviour might also find a place among more sceptical readers.

4. Latsis (ed): *Method and Appraisal in Economics*.

Some social scientists, of whom the writer is one, believe that the prime excuse for their subjects is that they will contribute to the wisdom and virtue with which men conduct their social affairs, and that, in particular, the pursuit of theory needs to be judged by this criterion. They will suspect, as luxurious, higher order subjects, quasi-sciences about quasi-sciences, philosophies of history, theories of scientific progress and the like. Not their cup of tea are conferences at which their grandest seniors assemble with acolytes, and, adopting the courteous convention that everyone present has read, digested and remembered 100,000 books, read papers to each other generalising about generalisations about generalisations.

Quite a strong whiff of cigar-smoke rises from the pages of this collection of essays. It results, as the editor explains, 'from the Economics Sessions of the Nafplion Colloquium on Research Programmes in Physics and Economics . . . in 1974 . . . Its central purpose was a synoptic examination of Lakatos's new and provocative methodology of scientific research programmes (MSRP) to developments in the physical sciences and in economic theory'. MSRP, he adds, holds that theory-appraisal in the Lakatosian system is a complex affair, and that its originator further insisted that 'the proper domain of philosophy or science is the appraisal of past achievements and *not* the rendering of heuristic advice'.

Fortunately the distinguished band of theorists, established or crescent, who contributed their essays, largely abjured aristocratic gamesmanship, and, while not confessing to any strong desire to be useful, allowed themselves to imply a profusion of useful judgments about the recent evolution and present state of economic theory: two of them, H. A. Simon and Axel Leijonhufvud, actually include, explicitly (as the editor observes, almost visibly wrinkling his nose) 'forward-looking elements'. Though their language is remote from that used here it seems to me that those two participants would accept the negative conclusion of my argument about current orthodoxy (and that several other

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contributors would not, if they chose to be blunt, dissent vigorously). How the positive pleas of this essay square with the recommendation of Leijonhufvud perhaps could not be quite decided (by anyone who cared to inquire) until his forthcoming *Marshall and Maximisation* is published; those of Simon, in his fascinating essay 'From Substantive to Procedural Rationality' certainly appear to contain, his taste for computers apart, some close resemblances. But, of all these essays, that by Coats, 'Economics and Psychology: the death and resurrection of a research programme', deals most directly with my themes. He finds in Veblen, Clark, Wesley Mitchell and other Americans much the same heterodox program as I advocate, and notes how it was 'soundly defeated before 1930' by the orthodox. He writes so deliberately within the terms of reference of the Colloquium that it does not quite emerge whether he is a 'resurrectionist', but the cap neatly fits the present author, and he wears it with pride.

All conference-going theorists, actual and aspirant, should include Latsis's volume in their 5,000, but I like to think that a few might slip mine into their baggage for lighter reading in the jet that returns them home.

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