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BOOK REVIEWS

The Economist as Preacher. By GEORGE STIGLER. (Basil Blackwell, Oxford, 1982.) Pp. 259, ISBN 0631 13235 X.

This book brings together under the one title a collection of previously published journal articles of George Stigler, winner of the Nobel Prize for economics in 1982. The papers coalesce loosely around the discipline of economics and its influence in shaping the progress of society. The result is a very powerful and thought-provoking book which should be prescribed reading for any economist with an inflated sense of importance of the discipline of economics. The title of the book does not provide an accurate description of what is to follow. Measured against his concept of preaching—exhorting individuals to higher motives or more exemplary conduct—Stigler establishes very early in the book that the great economists of history, from Adam Smith on, have done very little preaching. Rather they have concerned themselves with understanding and describing the workings of the economy with a dogged pursuit of efficiency, especially in relation to public policy formation and execution. A more apt title, descriptive of the flavour and content of the book, might be the *Sociology of the Discipline of Economics*.

The book is divided into four parts. In Part 1 Stigler considers the ethical basis for economic thought. Economic logic centres on the utility-maximising behaviour of individuals in their pursuit of self-interest. It is convenient for the economist that most ethical values do not conflict with individual utility-maximising behaviour. Stigler argues that economists generally share the ruling values of their societies. Nevertheless, efficiency has been at the centre of their value system. Why have they chosen to give little emphasis to values other than efficiency? The answer according to Stigler is that alternative values which might overcome the efficiency presumption are usually weak or conflicting.

Part 2 encompasses a variety of issues loosely classified under the heading 'Sociology of the History of Science'. Most of this makes for heavy reading. The arguments are complex and the degree of concentration required to absorb them is high. Nevertheless, the author still finds room for some dry humour. 'Thomas Robert Malthus had one brother and six sisters—I would conjecture that he would have produced his theory several years earlier if he had instead had six brothers and one sister' (p. 88) being a fine example.

The sociology is illustrated around a series of provocative questions including—do economists matter? A central and rather sombre thesis developed by Stigler is that economists exert a minor and scarcely detectable influence on the societies in which they live. While this thesis is not tested formally (if it ever could be), circumstantial evidence is presented to show that major economic changes that have occurred can be explained primarily in terms of their being the appropriate response at the time to shifts of political and economic power rather than the persuasion of economists. This judgment appears unduly pessimistic in the Australian context. Take protection policy as an example. One would be hard put to deny the very influential role played by academic and govern-

ment economists over the past decade in contributing to the current consensus in the political arena that trade barriers must be lowered. In an analysis of the reasons for the long adoption lag of utility theory, Stigler concludes that the adoption of new economic theories is dependent on there being an environment receptive to such theories. Economics, as with other sciences, accepts ideas only when they fit into the current state of science.

Part 3 contains a fascinating account of the main contributions to economic thought made by the great classical economists, Adam Smith and John Stuart Mill, and of more recent times, Henry Calvert Simons. These lucidly written chapters provide a transparent evaluation of the major theoretical achievements of these men. Two pertinent issues addressed in this part of the book concern the basis on which economists have felt themselves equipped to give useful advice in the proper function of the state, and why the influence of economists on public formation is so low. The great classical economists argued for *laissez-faire* largely on the basis of rather superficial judgments on the economic competence of the state. According to Stigler, not much improvement in the level of scientific debate on this issue has occurred since. He suggests a major reason is that of the difficulty of bringing the bounds of state competence and the areas of its superiority over private actions within a coherent theoretical system. Stigler expresses great satisfaction in the growing insistence upon quantification in economic analysis, a development with which this reader fully concurs. It is this development that leads Stigler to suggest that economics may be finally at the threshold of its golden age.

On the second issue, Stigler contends that the essential ambiguity of general theoretical systems with respect to public policy has been the real basis of our troubles. 'So long as a competent economist can bend the existing theory to either side of most viable controversies without violating the rules of professional work the voice of the economist must be a whisper in the legislative halls' (p. 132). This is a proposition with which the intelligent observer, outside the profession of economics, of say, the current macroeconomic debate on the appropriate set of policies for stimulating employment, would surely agree.

The fourth and least satisfactory part of the book is labelled quantitative studies. It incorporates a number of papers which seem at times to have a somewhat distant attachment to the overall thrust of the book. The first provides an analysis of the citation practices in economics. There is nothing surprising in the two major conclusions; namely, that successful scholarly work eventually becomes part of the corpus of the science whereby its paternity is ignored, and that the volume of work published is a minor determinant of how often an author is cited. The second is a lengthy and entirely US-oriented study of the citation practices of doctorates in economics. The third undertakes a review of the literature of the kinked demand curve as a basis for formulating hypotheses on the nature of scientific discourse. This review unveils an enormous proportion of publications in the area which are unprogressive in that they add nothing to the accumulation of rigorous theory or tested findings. This leads Stigler to pose the following rather disturbing question, one which all economists engaged in the publish or perish rat race would do well to ponder. 'Can it be that scientific discourse is like ordinary social discourse; simply practice in communication, so that, when

an important message needs to be communicated, the facilities for communication will not be impaired by atrophy?' (p. 240).

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The Control of Resources. By PARTHA DASGUPTA. (Basil Blackwell, Oxford, 1982.) Pp. 223, ISBN 0631 12935 9.

This book is intended for the intelligent 'generalist' who is interested in the economic analysis of optimal uses of resources. The author had in mind 'a shrewd civil servant . . . who not only relishes analytical discussions but also thinks they are essential . . .'. If he does not know the calculus, he will need to have 'a young colleague who does'. The book also attempts to accommodate the needs of the university student — who presumably knows the calculus.

Dasgupta achieves his aims extremely well. The book covers a wide range of issues relating to the optimal use of renewable resources — including population planning, fisheries and forestry management, all from the standpoint of modern welfare economics (broadly defined). Dasgupta surveys in a competent and lucid manner most modern developments in the field of resources and environmental economics — with the exception of non-renewable resources. The author combines theoretical analysis with facts and figures. His list of references to both theoretical and applied works is in itself a commendable piece of work.

The welfare index advocated by the author is *not* based on some version of consumers' (or producers') 'willingness-to-pay' or some variant of 'compensation tests'. Distributional weights, according to the author, must be specified. The chapter on 'Dimensions of Welfare' is particularly interesting. The author discusses at length the basic concepts such as the social rates of discount, the measures of social product, the social rates of return, and population issues. He gives extensive references to modern contributions to the various debates.

The author attacks the economist's obsession with identifying 'distortions'. Given that lump-sum redistribution is not feasible, the correct question is 'what is the best set of distortions to have?'. While this point is generally recognised by the profession, it is most forcefully put by Dasgupta, who argues that 'endowing private property rights . . . on what was once a common-property resource . . . is not necessarily a move towards greater welfare' (p. 29). He quotes Marx 'The parliamentary form of the robbery is that of Acts for enclosures of Commons, in other words decrees by which landlords grant themselves the people's land as private property, decrees of expropriation of the people' (p. 29).

Turning to more technical issues, I must admit that, while the author translates mathematics into English remarkably well, I am afraid that at several places only those readers well versed in the theory of optimisation will fully appreciate the meaning of the author's discursive exposition. For example, section 5.5 (on the social rates of return) makes use of concepts which readers without a knowledge of the calculus of variations will find hard to understand. This is only an observation and is not meant

to be a criticism of the author's exposition. Given space constraints, I do not think I could do a better job.

The book contains a few annoying misprints, for example in the middle of page 75, and, at several places, incorrect references to diagrams (p. 57).

I strongly recommend the book to anyone interested in resources and environmental economics. I myself derived a lot of pleasure from reading it.

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Agricultural Research Policy. By VERNON R. RUTTAN. (University of Minnesota Press, Minneapolis, 1982.) Pp. 369, ISBN 0 8166 1101 7.

'Interdisciplinarity'. This is Vernon Ruttan's message to those who formulate research policy in agriculture (and, indeed, anywhere else). It cannot be otherwise, as the name of the game has to be a socially optimal allocation of resources to research and within research. If the economist wants to model the agricultural research system adequately, she has to know about its primarily biological basis. If the agricultural scientist wants to know how efficient the research effort is, she has to be able to use the economists' techniques. What is more, both of them have to absorb knowledge from scores of other disciplines too.

The book itself is a good example of such an approach; it demonstrates Ruttan's ability to acquire and synthesise relevant information from such far-away disciplines as plant breeding, mechanisation and management techniques in addition to his own—economics. Chapter 1 throws light on the author himself. Apart from being interesting and introducing the human dimension, it enables the reader to appreciate how much Ruttan's abovementioned message is based on personal experience.

The wider scenery of agricultural research is evident in Chapter 2; economic theory is outlined relative to the role of agriculture in the economy. The emphasis is on economic development and how agricultural innovation has contributed to that in different countries. Exposure of the most chronic existing disequilibria in agriculture (conflict between agricultural productivity and the well-being of rural people, a gap in labour productivity between developing and developed countries, and the problems associated with the change from a resource-based agriculture to a science-based one) amounts to a declaration of tasks confronting agricultural research. One can make the observation that these problem areas are characteristic of the less-developed world. Although not stated explicitly, Ruttan chooses to concentrate on the question of technology transfer to the Third World.

Chapters 3 to 5 form a logical unit. The research institution is described in Chapter 3—its structure, logistics, ideology and personnel. Interaction of the last two, supported by the others, sparks the innovation process. National agricultural research systems of historical importance (those of the United Kingdom, Germany and the United States) are introduced in Chapter 4, along with those of Japan (agriculture being a field where development was based on indigenous Japanese technology)

and India, Brazil and Malaysia (a few bright spots in the Third World). The topic of Chapter 5 is that new powerful tool of technology transfer—the system of international agricultural research centres.

Chapter 6 is the weakest part of the book. This is not solely the author's fault, since the review and evaluation of research programs is a little-explored area. The general feeling is probably that success stories speak for themselves, and as far as the failures are concerned—well, let's forget about them. Chapter 7 (on the location and scale effects in agricultural research) is mislocated; its ideal place would be between Chapters 4 and 5. The role of the private sector in research is an ideological minefield, but Ruttan's cool fact-finding evaluation (Chapter 8) should be able to defuse them for the unbiased reader. When it comes to publicly financed research, in Chapter 9, Ruttan does not get lost in dry and boring details. Instead he turns his readers' attention to something not instantly obvious: the different effects on research output of two alternative ways of financing research—institutional and project funding. This part is one of the pearls of the book. Chapter 10 is a thorough review of almost everything significant written on the benefits of agricultural research. Along with Chapter 9, it forms a thematic unit with Chapter 6, and could have easily accommodated the anaemic material of the latter.

Chapter 11 is why the book was needed in the first place. Resource allocation to research and within research is the core of the decision problem facing policy makers. The available methodology is still in its infancy and Ruttan can hardly do anything but describe and comment. His effort in writing this book, however, has to bear fruit in this particular area. Chapter 12 is for the rabid ideologue or the agricultural scientist with a very conservative intradisciplinary approach to research. Demonstration of the important role of economists in formalising agricultural and agricultural research policy should certainly not be necessary for anybody else. It is lamentable enough that such a painstakingly compiled proof is needed to justify the importance of including economists in agricultural policy making. Finally, Chapter 13 is a mixture of moral message on the researcher's responsibility, emphasis on the importance of institutional change to realise the full benefits of research and a warning about the danger of letting emotional issues decide the direction of policy instead of cool rationale.

You say you have a feeling of *déjà vu*? Rightly so, as nine of the thirteen chapters are based on previously published essays. Still, it is useful to see Ruttan's ideas collected and thematically organised in one volume. His knowledge is wide and impressive, the argument is as objective as it can be (a good proof of which is his balanced evaluation of the Green Revolution on page 348). It is a pity that this excellent book is plagued by a great number of minor, but nevertheless annoying, typographical errors.

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Heritage Conservation in Australia: An Evaluation of Economic Incentives. By ANTHONY CHISHOLM and IAN REYNOLDS. (Monograph 6, Centre for Resource and Environmental Studies, Canberra, 1982.) Pp. 98, ISBN 0 86740 044 7.

The authors set out to examine 'the (cost-) effectiveness of various policy measures designed to ensure (adequate) conservation of particular elements of Australia's heritage' (p. v). Heritage is widely defined to include important components of the natural and cultural environment, but the study really deals only with man-made components. These are more amenable to conventional economic analysis.

Heritage conservation is characterised by several common forms of market failure which are described in Chapter 1. They include joint supply, non-excludability, externalities, and monopolies. These characteristics, as well as the presumed significance of the value of heritage to non-users (in both this and future generations), are adduced as the rationale for government intervention.

Before analysing the relative merits of several forms of intervention available to government, the authors digress to discuss the effect of heritage conservation policies on the land market (Chapter 2). The thorny question of compensating owners for changes in their property values following conservation ordinances is the main point of discussion. It is concluded that compensation is warranted only if government planning policies are erratic, thus creating uncertainty in the land market.

Various heritage conservation policies are analysed in the following six chapters. They include income tax incentives, rate reductions and direct subsidies, zoning, transferable development rights, and government acquisition and management of heritage property. The analyses are based only on relative cost-effectiveness; no attempt is made to consider the value of benefits or the optimal levels of heritage conservation.

Most of the text is taken up with explanations of the mechanisms of those policy options, and this is useful material for administrators. As to empirical conclusions, the authors perforce rely mostly on research results from overseas. Some results are derived by deduction, for example, the conclusion that income tax incentives should be arranged so that they do not vary with the marginal tax bracket of the prospective donor. Similarly, the conclusions concerning rate reductions compared with subsidies are based on the conventional discounting formulae. From my reading, most of the conclusions seemed correct (though one wonders whether results that depend on differences in discount rates between local, regional and national groups will persuade many administrators).

No attempt is made to compare the cost-effectiveness of one set of policies with that of another. Rather, the approach is to test whether the cost of the incentives to the government is outweighed by the value of heritage contributions generated.

Overall, it is a good little book for its purposes. One could cavil about a number of minor irritations, for instance much of the labelling on the very first diagram is missing, and this gets the reader off on the wrong foot. Other diagrams are also badly labelled (for example, Figure 22). Further there is some jargon that could easily have been avoided. Is 'Pigovian' (p. 15) an adjective that heritage administrators would understand? None of the seven typographical errors I found were serious. A

more vexing complaint, though, concerns the set of equations used to derive the conclusions regarding rate reductions and subsidies (Chapter 4). These contain errors in both notation and logic.

The authors do not declare to what audience the book is directed. I presume it is mainly for the administrators of heritage policies, and in the main, I think they, together with students, will find the book useful.

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Pastoral and Social Problems in a Semi-Arid Environment. A Simulation Model. By T. G. FREEMAN and P. R. BENYON, (eds). (CSIRO Canberra, UNESCO Paris, 1983.) Pp. 575, ISBN 0 643 03537 0.

In this book the editors (from the CSIRO Division of Computing Research) and authors concern themselves with the five D's of the Dead Heart—Distance, Drought, Depressed regional economy, Declining population, and Damned flies. Actually, it's more of a technical manual than a treatise and the authors don't pay much attention to the fly problem. Because the authors broke with tradition by not giving their model a name, I will christen it ARID.

The authors report the results of a study initiated by the international Scientific Committee on Problems of the Environment (SCOPE) and the Australian Academy of Science. The main objectives of the study, as determined by SCOPE, were that simulation modelling be applied to problems of arid-land management; the models were to be multi-disciplinary, encompassing technical and social relationships; and emphasis be given to the problems of 'inter-facing' models developed by workers from various disciplines rather than to validation of the models themselves.

The book is divided into twenty-one chapters and six appendices. In an introductory chapter, Goodall gives the background to the study. In Chapter 2, Williams describes the problems in the regions addressed by ARID, which largely consist of those listed in the opening paragraph of this review. In Chapter 3, Anway describes the objectives of the study from international, Australian, and modelling perspectives and includes details of control variables at regional, property and paddock levels. In Chapter 4, Benyon describes the development of ARID and the main methodological issues that arose during its construction. The chapter also includes a summary of each of ARID's sub-models.

In Chapters 5 to 18, the authors describe the structure of each of ARID's sub-models: paddock (Noble and Freeman), biological management (Freeman), economic management (Freeman and Benyon), saleyard (Freeman and Abel), simplified pastoral model (Freeman and Benyon), labour (Benyon, Tronson and Flood), transport (Benyon and Tronson), medical services (Goodall), education (Goodall), general business (Johnston and Watts), government services (Kiefer), tourist (Anway and Sands), demographic (Benyon) and social (Benyon, Tronson and Williams). In each of these chapters the authors discuss the objectives of the sub-model, its general structure, data requirements, output and details of the computer code. All of the sub-models are writ-

ten in the FORTRAN-based Advanced Continuous Simulation Language.

In Chapter 19, Mawson discusses data co-ordination. Output from the whole model is described by Freeman in Chapter 20. In the final chapter, Johnston discusses possible further development and uses of the model.

The authors qualify their work by pointing out, more than once, that they had only six months (the last half of 1975!) in which to formulate the models, collect data and produce results. They also make it clear that many of the sub-models have been written by people who are not expert in the appropriate discipline. They claim that the major problem for the study '... has been obtaining the involvement of social scientists ... In the face of this difficulty we have gone ahead using our own ideas. We are hoping that wherever our ideas are wrong, the relevant expert will be unable to resist the temptation to correct us ... we have called this the "red rag" method.' (p. 531). The work is therefore suspect in a technical sense and it is doubtful whether experts will find incentives to correct it. On the other hand, the fact that the authors were often not burdened by the paradigms of the day in various disciplines may present benefits.

In addition to attempting to meet the objectives set by SCOPE, the authors obviously felt a need to justify the project in Australian terms. They hoped, for example, that ARID would be useful at the paddock, property and regional levels and that it could contribute to the solution of problems ranging from grazing management to financial planning at the local government level. Other possible applications included assessing the regional impact of various policy options, for example, floor price schemes, taxation measures, and use of arid lands as a sink for atomic wastes.

The book does not contribute much to the solution of Australian problems. As a tool for evaluating policy options ARID has a long way to go before it would be accepted by economists, planners, policy makers, graziers and local government officers. Its whole philosophy needs closer examination. For example, is it necessary or desirable for ARID to attempt to encompass such a wide range of social and economic activities involving an equally wide range of levels of aggregation?

In terms of meeting its primary objectives, the ARID exercise has probably succeeded. In a relatively short period of time the team was able to produce a multi-disciplinary model that was at least plausible in terms of the characteristics of the arid regions of Australia. However, the fact that it took so long to publish the work cautions one to qualify even this claim.

Overall, the book should mainly appeal to research workers interested in modelling local and regional economies using simulation procedures. The authors present their work carefully and describe sets of methodologies and data that others will find useful, particularly in relation to further bio-economic studies of the arid lands of Australia and other countries.

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Seasonal Dimensions to Rural Poverty. By ROBERT CHAMBERS, RICHARD LONGHURST and ARNOLD PACEY, (EDS). (Francis Pinter, London, 1983.) Pp. 259, ISBN 0 86187 334 3.

According to the preface 'the process which has led to this book was sparked off by the discovery in a seminar at the Institute of Development Studies at the University of Sussex that in both northern Nigeria and a part of Bangladesh there was a peak in births in the late wet season'. This finding led to a conference on the impact of seasonality in rural tropical areas on demographic, economic and social behaviour, the resulting book being an edited version of the papers presented. The various papers have been arranged under seven broad chapter headings dealing with seasonal energy relationships, economic relationships and the seasonal use of labour, the seasonal ecology of disease, seasonal patterns in births and deaths, family health and seasonal welfare and the social distributions of seasonal burdens. The editors have provided introductions to most of the chapters, so in spite of multiple authorship, each chapter is developed around a central theme in a reasonably coherent fashion. This is a considerable achievement, given the disciplinary and geographic spread of the almost forty case studies which the book contains.

The basic theme of the book is straightforward enough, and well summarised in the preface:

. . . most of the very poor people in the world live in tropical areas with marked wet and dry seasons. Especially for the poorer people, women and children, the wet season before the harvest is usually the most critical time of the year. At that time adverse factors often overlap and interact: food is short and food prices high; physical energy is needed for agricultural work; sickness is prevalent, especially malaria, diarrhoea and skin infections; childcare, family hygiene, and cooking are neglected by women overburdened with work; and late pregnancy is common, with births peaking near harvest. This is a time of year marked by loss of body weight, low birth weights, high neonatal mortality, malnutrition, and indebtedness.

In elaborating these ideas, the economists tend to concentrate on the seasonality of employment, prices and wages (especially in the densely settled parts of South Asia where a high proportion of the poor have little or no access to land), while the demographers concentrate on the seasonality of births, deaths and marriages, and the medical specialists emphasise the seasonal ecology of particular diseases (diarrhoeal, respiratory and insect-borne). However, the interrelationships are obvious in many of the case studies. At the same time, several contributors stress that seasonality is seldom the cause of rural poverty; the problem is most often the underlying socio-economic system. Thus Edward Clay concludes his paper on Bangladesh by pointing out that 'seasonality brings regular crises points to the lives of the poor, but the causes of poverty are bound up with the increasing numbers of landless people in rural areas. Rural works or grain purchases which reduce the effects of seasonality merely relieve poverty without attacking the socio-economic causes of landlessness' (p. 100). This point is taken up again by Robert Chambers and Simon Maxwell in their concluding comments: 'the most effective counter-seasonal measure is to remove extreme

poverty, and this could often best be done by redistributing land and water' (p. 238).

However, this conclusion does not necessarily imply that all other counter-seasonal measures are just 'palliatives or diversions'. Chambers and Maxwell discuss a number of such measures, from public works to improved food storage techniques and health delivery programs which could make (and in at least some parts of Africa and Asia already are making) a considerable difference to the way in which seasonality affects the lives and well-being of the rural poor. Many of these policy interventions are already familiar enough but, by emphasising the seasonal nature of the rural poverty problem, the important point can be made that to be effective, anti-poverty measures do not necessarily have to be implemented on a year-round basis. To fiscally hard-pressed governments in the developing world that at least is good news.

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