BOOK REVIEWS

The Structure of the Australian Economy. BY P. H. KARMEL AND M. BRUNT. (Melbourne: Cheshire, 1962.) Pp. xii + 154, 18/6.

This book was conceived as one of a series sponsored by Duke University on the economic systems of the British Commonwealth countries; but it became apparent both to the sponsor and to the authors that it would prove to be a useful university text in Australia. While giving some information on these subjects, it is not designed primarily as a book of economic theory or of tables of industrial costs and markets. Much of its space is devoted to giving a useful account of all the principal economic institutions — companies, banks, trade unions, etc. — of Australia, and of some of the problems which they have to face.

The principal conclusion is that Australian industry suffers from a marked lack of competition, even in comparison with such countries as Canada. While governments and public opinion pay much attention to "aggregates" such as employment, purchasing power, price level and the balance of payments, the lack of competition in industry is accompanied by a serious lack of interest in "efficiency of resource allocation in the Australian economy" — a very true and trenchant criticism. The authors quail before the task of describing the multiplicity and strength of price-fixing and other restrictive agreements in Australian industry; but point out very well the extraordinarily lenient attitude towards them adopted alike by the Commonwealth and by State Governments.

A businessman in Western Australia, questioned by a State Royal Commission, said that he favoured price-fixing agreements between businesses "because we stand for free enterprise". To state the issue precisely, the phrase "free enterprise" included the right to undertake the enterprise of restricting enterprise. This is undoubtedly the sense in which many Australian businessmen (and politicians) understand this phrase; it may be as well therefore not to use it. The phrase *laissez-faire* is not used in public discussion now, though it is apparently still used in universities. The authors, in the conclusions to their book, use this phrase on two succeeding pages with two different meanings; so it is as well to exclude the phrase *laissez-faire* too. The one unambiguous phrase appears to be "free market", which excludes private restrictive agreements as well as government protection; those who want to convey this meaning (who are few in Australia) should use this phrase.

A central position in the book is occupied by an interesting new study showing that 33 percent of all employment in manufacture is in "highly concentrated" industries where half the business is in the hands of four firms or less, and another 11 percent in "fairly concentrated" industries where half of the business is in the hands of 4 to 8 firms. A less precise table on concentration in retailing is justified in classifying garages, hotels, newsagents and chemists as "oligopolistic", or selling at maintained prices; but it seems hard on Australian butchers and fruiterers to put them in the same category. The authors fear that the establishment of new suburban shopping centres will make retailing less competitive; American experience has been quite to the contrary.

The book does convey to its readers, as it should, some sense of the urgency of the balance of payments problem, though it does not discuss the alternative proposals for dealing with it, namely increasing agricultural and pastoral production, further restricting imports, borrowing more money, or just sitting down and wishing that someone would find a lot more oil. The authors seem to take for granted the two outstanding evils of the political and economic structure in Australia, namely its excessive centralization, and its aversion to competition, from which it seeks internal as well as external protection.

It is true that a book such as this has to be kept short; but a number of other issues deserved at any rate a short mention. There is very little on population. It is sad to see Professor Karmel, who in 1944 led the world in devising an improved measure of reproductivity, contenting himself with a reference to that obsolete measure, the "net reproduction rate" — and a casual and uninformative reference at that. We have no discussion of Australia's uneconomic irrigation projects, or of the specious economic arguments which were used to support them, or whether the Snowy River project is worthwhile. An account of restrictive practices should make clear how often it is misguided government action which has made these private restrictions possible, not only in protecting industry against imports, but also in many State Government licencing schemes, of which perhaps the most striking is the "assigned lands" in the cane-growing districts in Queensland — probably the only instance in history of a Labor Government specifically creating a landed aristocracy; or the dog-in-the-manger provisions whereby arbitration courts can determine shop hours, even for shops which employ no labour, in order to prevent them competing unduly with shops that do; or the extraordinary situation in the shipping industry, whereby a Communist trade union and a highly anti-Communist ship owners organization are between them able to put such pressure on Labor and Liberal governments respectively, so that it costs less to ship goods across the world than from one Australian port to another — and it may often be quicker too.

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Water Supply: Economics, Technology, and Policy. BY J. HIRSHLEIFER, J. C. DE HAVEN AND J. W. MILLIMAN. A RAND Corporation Research Study. (Chicago: University of Chicago Press, 1960.) Pp. xii + 378, $7.50.

The aims of this book, according to the authors, are "to inform the general citizen about water supply and to provide instruction for the administrator and professional in the field as to the application of economic and technological knowledge to the solution of practical problems". The authors also express the hope that their book will "have the effect of pricking the bubble of complacency in which many water-supply professionals now live". Their well-written and cogently argued statement of the principles of economic allocation applied to water should certainly achieve success in both directions.

At a time when proposals for the establishment of a Water Resources Council (with rather restricted technically-oriented terms of reference) are being actively canvassed in this country, there is an urgent need for greater public appreciation of the principles which Hirshleifer and his co-authors have outlined so effectively in this stimulating book. It is true that their net is cast more widely than in most books of this kind so that it covers domestic and industrial uses of water as well as its use for irrigation and power generation. However, the employment of such a broad frame of reference is becoming increasingly necessary in this country. We have already reached the stage in some areas where expanding industrialization is making necessary some reappraisal of existing water use.

There will be many who will not share the authors' distrust of political and administrative decision-making, nor their evident faith in the efficacy of the price mechanism as a means of ensuring more efficient utilization of water. Yet their telling practical illustrations of the consequences of irrational water pricing should convince even the most hardened skeptic of the wisdom of making greater use of what Sir Roy Harrod once described as "that eternal talisman, which has the power of stripping all the padding, of distinguishing the urgent requirement from the less urgent, the immediately necessary from the postponable".

As the authors of the book acknowledge, there are reasons (arising mainly from problems of interdependence and communality of supply and of use) why the market mechanism should not be relied upon exclusively to rationalize water usage. But, on the other hand, the public needs to be on guard against people who go to the opposite extreme, endowing water with mystical, if not sacred, qualities and claiming that it must be treated differently to other resources. The alleged unique importance of water supply to particular regions is but one example of this romanticism.

Then there is what the book aptly describes as the "monument syndrome", manifest in the desire of engineers and others to build huge dams and to make the desert bloom as evidence of technical prowess, even if some of the schemes "border on the manic". As the authors deplore, "no one has ever won contemporary acclaim as a hero for wise economy and rationality nor is his name celebrated in history books or attached to magnificent dams — our modern equivalent of the pyramids".

Many of the forceful indictments with which the book is spiced have an all too familiar local ring. Unfortunately, in this country too, "the principle of wise use of all resources is frequently lost sight of in the enthusiasm to develop one particular type — water resources". Here, too, "the gravy train runs in the same direction as the glory trail".

Apart from the chapters giving a very useful outline of current water-supply technology and an exposition of classical economics as applied to water use, the book is directed to three main problems in the economics of water — the improvement of the allocation of existing water supplies, the development of additional water supplies, and the legal question of water rights. The authors demonstrate repeatedly that dramatic savings are achievable through more prudent use of existing supplies. The distinguishing feature of their review of cost-benefit analysis as applied to public undertakings, is their advocacy of an interest rate of 10 percent per annum as the appropriate rate for discounting purposes.

A hundred pages of the book are given over to detailed critical analyses of two important water decisions — one concerning the supply of water to New York City and the other, its supply to Southern California. Though these case studies provide excellent vehicles for demonstrating the points made earlier in the book, the chapters in question will be of little interest to Australian readers. But the principles developed in the first two-thirds of the book are of virtually universal applicability and should be required reading for "water romanticists", with which this country seems to be so generously endowed.

KEITH O. CAMPBELL *University of Sydney.*

Goals and Values in Agricultural Policy. Center for Agricultural and Economic Adjustment. (Ames: Iowa State University Press, 1961.) Pp. viii + 364, $4.95.

This book contains 16 papers delivered to a conference sponsored by the Center for Agricultural and Economic Adjustment of Iowa State University. Eighteen contributions to discussion are also included. Ten of the sixteen papers were written by economists; the remaining contributors included sociologists, political scientists and others not so easy to classify.

Although the conference proceeded according to a plan — briefly: the development of the value system, and current major goals of American society; society's, and farm people's goals for agriculture; structural and value problems of agriculture; agricultural policies consistent with social goals — and while the inclusion of discussion papers introduces some much needed continuity into the book, the overall impression given is that of a miscellany. Pieces of technical economic analysis coexist — peacefully, but uneasily — with reflections on "agrarian virtue and republican freedom" and a disquisition on "the rise of the Yankee as the distinctive American type". This result could hardly have been avoided, given the broad, not to say vague nature of the subject matter of the conference, and the decision to adopt an interdisciplinary approach. Furthermore, the outcome is not helped by the fact, noted by Heady in the preface, that "the papers presented did not always follow the general conference outline". A more ruthless editorial hand might have improved matters somewhat: for example, Geoffrey Shepherd's confession that he is discussing a chapter "under the slight handicap of not having seen it yet", while understandable at a conference, seems hardly appropriate in a book.

The spirit in which the conference was organized is probably fairly accurately indicated by the following four beliefs culled from Heady's and Burchinal's opening chapter:

(1) "The major problems in farm policy evidently are those of goals and values . . . The (farm) problem continues not because economists lack general understanding of its causes or alternatives which could alleviate it, but because public agreement is generally lacking on the appropriate means and, to an extent, on the proper objectives of farm policy."

(2) "The problem is that 'of determining what mix or combination of goals . . . is optimum, desirable or acceptable'."

(3) "Some . . . of the conflicts in agricultural policy arise because the public lacks information before action programmes are put into effect."

(4) "The real positive prospect is that the farm problem will be recognized as one in goals and values, and education and communication will be developed accordingly . . . Citizens will have a foundation for more clearly seeing the basis and consequences of particular policy courses . . . They will have information for formulating and articulating goals which are meaningful to themselves, to the growth trends in the national economy and to the nation's world responsibilities".

The first of these propositions is clear but debatable, while the second and third are non-controversial. What of the fourth? Is it, in Maddox's words, a "searching for a will-o'-the-wisp — for some kind of magic verbal statement of goals which 'might remove all conflicts in farm policies' "? Even though we might be inclined to agree with this assessment, we should nevertheless be grateful to the conference for eliciting a number of useful discussions of value and interest conflicts in the field of farm policy. These include analyses of conflicting policies pursued by farmers' organizations (Hathaway), of the conflicting interests of farmers residing in different regions and/or producing different commodities (Kaldor and Hines) and of the sources of non-farm opposition to current agricultural programmes (Soth).

Support for the first proposition is contained in the book's final chapter, in which Mehren reflects at length on two earlier chapters — each entitled "Positive Policies for American Agriculture" — contributed by Swerling and Schnittker. These authors' policy prescriptions are almost diametrically opposed — the former recommending the abandonment of present price support and control programmes and the enactment of an income insurance plan, the latter suggesting continuance, but improvement of current policies. Mehren concludes that Swerling's and Schnittker's differing policy positions stem basically from different values, and that "it is quite impossible to reconcile these differences".

An opposing, and more optimistic view is expressed by Wilcox: "If we could get a substantial body of agreed economic facts in these areas I doubt that the remaining conflicts in policies would be very significant". Without prejudging the tractability of the value problem, Brewster argues that "until we clarify the basic causes of the farm problem, we have no way of knowing . . . what are the actual value conflicts that we must face up to in solving it . . . short of this, nothing definite can be said on society's values with respect to workable goals for agriculture".

There seems to be much truth in this view. At any rate, economists' views concerning the structure and functioning of the economy, and the nature of the low income problem in farming often differ in fundamental ways, and their varied policy prescriptions frequently stem from differing assessments of these matters of fact. Heady's and Burchinal's assertion that "economists can suggest a half dozen effective means of eliminating the (farm) problem" may not so much suggest the ethical neutrality of economics as the existence of several different diagnoses of the problem.

Perhaps, then, the conference's concern with goals and values was premature. But even if conflicting goals and values are the essence of the farm policy problem, another difficulty seriously hampers discussion of the type attempted in this book. This difficulty — in the words of Glenn Johnson — is that "we do not have a generally accepted method of developing and using normative concepts for solving policy problems".

There are thus several reasons why the conference, and the book, can hardly be considered a success. However, it is reasonable to hope, with Heady, that it might "serve as a catalyst" for further discussion of its subject matter. In addition, a number of individual papers — including most of those referred to in this review — are well worth reading.

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Surplus — The Riddle of American Agriculture. BY A. R. BIRD. (New York: Springer Publishing Company Inc., 1962.) Pp. 128, $3.75.

This book might perhaps be classed as a popularization of Agricultural Economics.

Dr. Bird opens his preface with the debatable assertion that the food surplus is the main problem of American agriculture. He then states that the text is written for the responsible citizen in words he can understand and that almost no economic jargon is used. These claims are true. However, this deliberate simplicity restricts the benefit likely to be derived from the book by the practising agricultural economist.

The author's method of analysing the food surplus problem is somewhat reminiscent of Ten Pin Bowling. Each of the major strategies for reducing surpluses — eating them, giving them away, getting farmers off the farm, slowing down technology, etc., etc. — are set up and then skittled. One way or another, Bird has managed to invoke nearly all the ideas that have been put forward at different times for overcoming agricultural surpluses in the United States. With so many ideas crowded into a short book, there is little adequate analysis of any of them. An idea is mentioned, then one or two objections given, and the idea is considered disposed of. The effect often resembles a split rather than a strike.

Despite its brevity, the book offers what is described as "a generally acceptable farm programme for the United States". Bird opts for marketing controls as the main ingredient of his prescription to vanquish abundance. The constitutional difficulties involved receive one mention only, on page 109; the political difficulties no mention whatsoever. He does not specify any particular form of marketing controls, although one detects a leaning towards transferable marketing quotas. This should endear him to at least some of the agricultural economists who have spilt ink against the ills of the Australian dairy industry.

Briefly his solution is:

— marketing quotas for commodities subject to price support;
— land retirement, including purchase of whole farms;
— associated measures to encourage farm families to retrain or retire;
— expanded research on farm adjustment problems; and
— expanded education of all citizens on the peculiar problems of agriculture.

There is, however, no recommendation for research into the socio-political problem of inducing Congress to pass agricultural adjustment legislation.

All footnotes or references are deliberately omitted, except those relating to tables. As a result, statements occur such as "One leading economist . . . " (p. 83), "A leading farm organisation . . . " (p. 25), etc. Elucidation of these anonymities would not have lead to any loss of simplicity and may have lent added authority to the statements themselves. The limited number of tables are well chosen, although seven out of the twelve derive from the one source, the January 1961 *Economic Report of the President*. A reading list is provided. It is arranged in a way intended to encourage laymen and undergraduates to study further the complexities of the surplus problem.

One unusual feature is a digest of the Agricultural Act of 1961. The digest is based not on the Act as finally passed but on the original proposals put forward by Secretary Freeman. Despite the buffeting that these proposals received from Congress before a much-modified Agricultural Act was approved in August 1961, and the even more unfortunate fate of the legislation submitted in 1962, the digest still forms a useful addendum, by providing an outline of the Democratic Administration's policy towards agricultural adjustment.

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Marketing Policies for Agriculture. BY J. R. BOWRING, H. M. SOUTHWORTH AND F. V. WAUGH. (Englewood Cliffs: Prentice-Hall, 1960.) Pp. xi + 276, $5.95.

The authors have aimed at a wider audience than professional economists and the result is a most readable, mainly discursive treatment of agricultural marketing problems. As a peripheral discussion of these problems the book is an excellent elementary introduction to a more intensive course of study in this field.

Stress is laid on the practical application of economic theory. "In short this book is about the kinds of agricultural marketing problems that require the making of decisions by individuals or private firms, by organised groups and finally by public agencies . . . to discuss the main types of agricultural marketing problems and to bring out the main economic principles useful in analysing and understanding them and in helping the individuals or groups concerned to reach wise decisions regarding them". (Pp. 9-10).

The broad division of the book into four parts — Decisions in the Market; Costs and Allocations; Marketing Policies of Organised Groups; and Marketing Policies of Government — emphasises the wide coverage of so short a book.

"Decisions in the Market" discusses the organisation of markets through the price mechanism, the allocative function of prices, the maximising behaviour of firms, opportunity costs and the principle of comparative advantage. The most useful exposition, however, is that of the concept of the perfect market which clearly indicates its usefulness as an engine of analysis whilst showing a healthy scepticism of its "optimality".

"Costs and Allocations" introduces marginal concepts, cost minimising, profit maximising and returns to scale. The section dealing with market development is a concise treatment of demand analysis and elementary measurement of income and price elasticities of demand. The essentiality of understanding the elasticity concept in marketing studies is stressed. The natural flow of this part leads to a discussion of advertising at the firm and industry level — all the essential points are there for development by the student's further reading.

The principles of market allocation are discussed by posing the questions where, when, in what form to buy and sell; from whom to buy and to whom to sell under conditions of perfect and imperfect competition. Geographical price discrimination is neatly presented both in calculus and diagrammatic form. The discussion of "when" to buy and sell offers a whole range of provocative ideas on the seasonality of supply and prices, carrying charges or the reverse in future markets, storage and, in brief, a reference to the gains and losses of farm income from stabilisation schemes.

A chapter on risks in marketing is used as a catch-all to take up discussion of situations involving both risk and uncertainty and a brief return to the mechanics of futures markets. The explanation of the relationship between spot and futures prices (p. 171) may have been better integrated with the discussion of the views of Keynes and Working in an earlier section (p. 142).

"Marketing Policies for Organised Groups", the subject of Part 3, is introduced by a discussion on group formation to achieve economic power, highlighting the weakness in the theories of oligopoly and oligopsony. The costs and benefits of the co-operative are evaluated shortly with some historical and statutory background information.

The goad to greater efficiency in competing firms provided by soundly managed co-operatives is shown and the conflict of interest groups, heightened by groupings of various kinds, is discussed. The balancing of such conflict, as non-price competition becomes more important, provides a link with the final part on Marketing Policies of Government.

The opening gambit of the final part of the book is to point out the compromise between technical perfection and costs in arriving at minimum standards for food products, and the necessity for grades to be based on existing market preferences, followed by a short discussion of methods of obtaining useful information about consumer preferences.

Regulation of prices and rates to protect producers and consumers from monopoly influences in the market are examined with particular reference to transport. The authors point out the vacuity of regulation on the basis of the size of firms or the existence of price discrimination in an industry. They establish the limit to regulation that "in general prices and rates should not be regulated by government agencies unless the cost of regulation is less than the injury that might be done to farmers and consumers without such regulation".

Storage operations of governments are examined and a distinction drawn between fluctuations in price and incomes and the problem in attempting to achieve a dual objective with a single policy measure. Government's main role in relation to efficient marketing facilities, it is suggested, is to act as a catalyst encouraging private industry to develop efficient facilities with minimum waste.

Surplus disposals are cursorily treated but the essential lessons are drawn. Perhaps more space could have been devoted to the usefulness of disposal of surpluses for foreign currencies both in achieving the political and economic aims of the donor country and in assisting the development of the recipient economy.

The book closes with two chapters covering co-operation between industry and government and the development of government services and some judgements of the authors on the extent to which government controls are warranted.

At the end of each chapter is a series of thought provoking questions for the student, together with a limited supplementary reading list.

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Economics and Management in Agriculture. EDITED BY W. H. VINCENT. (Englewood Cliffs: Prentice-Hall, Inc., 1962) Pp. xvii + 452, $11.

Economics and Management in Agriculture is designed to be a comprehensive undergraduate text in agricultural economics. The authors are twelve economists at Michigan State University. The book has presumably been developed as basic material for a seminar course in which the authors participate. It commences by giving its readers an introduction to the basic problems of management and decision-making, and builds from there into the theories of production and consumption, principles of marketing and price determination, the institutional environment of agriculture, through to the place of agriculture in the American political and economic scene. The authors hope to provide the student with a working knowledge of the cogent ideas in these five fields of agricultural economics.

This is a lot to expect from a single text. The path it follows is similar to those of its recent competitors. Much of its material is far from dull and is stimulating to those well past the introductory stages of the subject. Yet it fails in its stated task of providing "the student with a basic knowledge of the subject matter which he studies." This is not because the book tries in all cases to say the last word, but because it frequently fails to say many of the significant first words.

The basic production and cost relationships which have bearing on profit maximization are clearly and ably presented. Yet the introductory chapters explicitly state that the real problems of management are change and uncertainty. These aspects of the economic environment are not treated explicitly later in the text as either an explanation of observed action or as phenomena to be considered in arriving at optimal decisions. The innovation of new techniques is dealt with largely in the various treatments of the theory of fixed assets which pop up throughout the book. Yet this subject is of importance in itself, and it is lost within lesser things. Glenn Johnson's fixed asset theory is displayed prominently in the chapters on supply and price determination, again, one feels, at the expense of more important considerations. This is particularly true in the chapter on supply, which develops points of marginal interest, e.g., reasons for differences in the elasticity of supply for upward and downward price movements, but neglects major issues such as time periods and uncertainties of production, life of resources, and substitutability between products even though the aggregate supply response is inelastic.

The book suffers from an undue paucity of empirical content. Its chapter on problems for commercial agriculture (in America) is executed quite well. Yet it would gain considerable sharpness, even for the Australian reader, if some of the aggregate price and income demand and supply elasticities for U.S. agriculture were mentioned. These have been estimated within tolerable limits. The analytical power of early chapters goes to waste in the evaluation of problems and policies for American agriculture, while this same power could have been demonstrated more adequately if the authors had drawn on examples using experimental, survey, and aggregate data.

The greatest deficiencies of the book *as a text* are its omitted topics: uncertainty, valuation and appropriation of resources (the chapter on the pricing of agricultural inputs is weak), growth and development, credit and tenure (which are treated only as economic institutions), innovation and the impact of new technology, and conservation. These are major concerns to decision-markers in agriculture, but they only come to light in a roundabout way in this book. Although many sections are stimulating and useful, and it would undoubtedly be a good companion to a seminar series conducted by the contributing authors, *Economics and Management in Agriculture* is inadequate as a text.

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An Introduction to the Principles of Agricultural Economics. BY R. H. TUCK. (London: Longmans, Green & Co., 1961.) Pp. v + 260, 25/- stg.

In his own words the author has set out in this book to provide . . . "an introductory course on the theoretical . . . side of agricultural economics" . . . "both for students pursuing university courses specifically in agricultural economics and for those who require the subject as part of more general agricultural courses".

There is a great need for a text-book to fulfil this dual aim but one is bound to express some doubts as to whether the present book has done so.

The book is well constructed and there is a logical development of the subject in three parts. Part I is on "Basic Economic Notions". In just under 110 pages, the student is introduced, *ab initio,* to demand theory, equilibrium of demand and supply, the functions of the price mechanism, imperfect competition, price instability (cobweb effects), the theory of money and the theory of international trade, all illustrated with hypothetical numerical examples. Because so much is attempted in so short a space, it's not surprising that the coverage of each aspect of theory is too hurried to really ensure that the student will have a grasp of the problem and of the techniques of analysing it.

In Part II we have "Elementary Economics applied to Agriculture". This is not, however, as one would have thought, a reiteration of Part I with actual realistic agricultural examples, though such a reiteration would have been by no means wasted in view of the pace at which the student has been taken through Part I. Instead, Part II is really a further development of the theory of production and factor pricing, and its chapters deal analytically with capital, labour, and land in agriculture. There are some good points in this Part, especially in the section on capital, but the major shortcoming is that there really isn't an adequate treatment of production theory which after all is at the heart of agricultural economics — especially the theory of the multi-product firm so typical, at any rate, of English agriculture.

Lastly, Part III carries the title "Agriculture and the Rest of the Economy" and is concerned with demand and marketing of agricultural products, population movements and other long term matters affecting agriculture and the Government's economic tasks. There is a most interesting and stimulating treatment of agriculture in a growing economy, but one wonders whether perhaps this isn't too advanced in relation to the general level of the rest of the book.

Mr. Tuck has eschewed the use of diagrams but instead relies on tables to illustrate his analysis. This is a mistake and seriously vitiates the claim to provide a course in principles. For the beginning student (especially the non-mathematical), abstract economic analysis is easier to assimilate if it is handled geometrically and, in fact, there are some elementary notions (such as the effects of shifts in demand curves which are not well handled in this book) which it is very difficult to teach unless it is done by a geometric (or algebraic) analysis.

The style is pleasant and fresh, but the treatment of each topic is discursive and tends to lack a cohesive thread to carry the student along with the argument. Because of this, and because of the absence of diagrams, it is very doubtful whether the beginning student would complete this book with the necessary fundamental grasp of even those elementary analytic drills which are the stuff of economics. Nor would the student be much clearer as to the power of economic analysis to explain reality, for all the numerical examples used are hypothetical and no attempt has been made to draw on the rich store of empirical and econometric work which fortunately characterises modern agricultural economics.

The book therefore tends to fall between two stools. For the general agriculturist it would have been better to offer a simple treatment well laced with simple empirical examples, sticking to those areas (namely simple production economics and price theory) where general agriculturalists can benefit from economics.

The student pursuing university courses specifically in agricultural economics would be far better employed with a thorough mastery of one of the basic standard texts in economic principles. When he comes to read the Principles of *Agricultural* Economics (if there are such things), he should be offered a treatment which shows these general economic principles in operation in the agricultural economy; and which accents the special institutional and policy aspects of agriculture; and which above all introduces that blend of empiricism so important in any science.

For these reasons this book cannot be recommended as a basic text for students although teachers will find it a very useful reference source for lecture treatment of some of the more advanced topics.

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Progress in Operations Research. (Vol. 1). EDITED BY R. L. ACKOFF. (New York: Wiley, 1961.) Pp. xii + 505, $11.50.

In an introductory chapter to this collection of essays, Ackoff considers the Meaning, Scope, and Methods of O.R. Inevitably, the problem of defining O.R. itself receives much attention. In a review of definitional attempts, Ackoff rejects the view that O.R. is 'a way of looking at things' in favour of the opposing thesis that O.R. can be defined as the science dealing with a particular subject; namely, *operations*. A set-theoretic approach to the problem of defining an operation is developed, but this proves something of a blind alley, since Ackoff is led to conclude that O.R. is not concerned with *all* operations as he has defined them. One feels at the conclusion of the chapter that Ackoff has fallen far short of his goal in re-opening "the question of definition for O.R.'s sake and not for the sake of others". To have said that O.R. was concerned with the construction of (mainly stochastic) decision rules would have embodied nearly all the important ideas in his discussion, and had the advantage of brevity.

A second chapter by Churchman is equally concerned with fundamentals. Dealing with Decision and Value Theory, which, in the context of the definitions given, constitutes all that is fundamental in O.R., this essay attempts to review significant advances in this field. Surprisingly, in a survey of 249 articles appearing in operations research journals, Churchman would only regard five as "contributing to decision or value theory". The review consequently deals mainly with the published monographs of such well-known names as Arrow, Karlin, Luce, Raiffa; furnishing a useful guide to this literature. Some important methodological issues are also discussed.

Hanssman's Survey of Inventory Theory from the Operations Research Viewpoint is a useful review written at an elementary level. The survey is carried out with a strong bias towards realism, and several of the difficulties inherent in using the more elegant models developed since the early 1950's are stressed. In particular, the practicability of classical work by Dvoretzky, Kiefer and Wolfowitz is questioned: "Existence proofs for the optimal policy, and the mathematical operations by which the policy may be constructed (are given). Generally speaking, however, these operations are far from practicable and the 'construction' is one in the sense of pure mathematics". The reviewer has good reason to endorse these remarks.

Other papers are generally written at a fairly technical level. An idea of the range of subject matter treated can be gleaned from the titles of Chapters 4-9: Mathematical Programming, Dynamic Programming, Dynamics of Operational Systems: Markov and Queuing Processes. Sequencing Theory, Replacement Theory, Theory and Application of Simulation in O.R. A chapter on Military Gaming is also included; judging by its contents, for sentimental reasons only. An epilogue entitled The Challenge of the Future adds little to the collection, but is written at a vague enough level for businessmen interested in O.R. to feel at home. From the economist's viewpoint *Progress in Operations Research,* Vol. 1, is best regarded as a useful, if somewhat unevenly written, guide to the literature of O.R.

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Rural Development in South Australia. BY W. S. KELLY. (Adelaide: Rigby Ltd., 1962.) Pp. 160, 18/6.

In his preface to this book, Professor Pike points out that "knowledge of the land has grown slowly, sometimes through laboratory experiments. Too much enthusiasm brought as many mistakes as too much caution, but most defeats were followed by an important break-through, whether in machinery, manure, markets, or hope." These few words effectively summarise what might well be regarded as the theme of the book.

Unfortunately the author has attempted to present a series of self-contained essays — such as "Early Settlement", "The Marketing of Wheat", "Harnessing the Murray" — which results, in sections, in an inevitable and confusing overlap in subject matter. For example, having dealt very effectively in Chapter 2 with "Manufacture of Agricultural Implements in the Early Days", the author devotes a large part of Chapter 8 to a history of the development of agricultural implement manufactures in South Australia.

The sections dealing with the spread of rural settlement up to World War I represent an extremely useful record — well supported by reference to archival material and recent research — of the factors which shaped rural development, but it is unfortunate that the author failed to include a map as a guide to readers not familiar with the many localities mentioned. The later chapters mar an otherwise promising piece of work, particularly in the lack of integration of subject matter and tendency to view the achievements of the farming community through the rose-tinted spectacles of one obviously in close liaison with agricultural scientists. Too little credit is given to the ingenuity displayed by many individual farmers in their adaptation to a relatively harsh environment. Chapter 7 ("Closer Settlement") provides numerous examples. Having worked logically from The Closer Settlement Act of 1897 through the Soldier Settlement schemes which followed the two world wars, the author proceeds to deal with the fat-lamb and dairy industries without any attempt to tie in these more intensive forms of production with the concept of closer settlement. In addition, some statements in this chapter may prove very misleading. For example, the author says that "towards the end of the century, because of . . . the benefits to be derived from the use of super-phosphate, the outlook for the farmer became more promising . . .", although actually very few practised top-dressing before the 1920's. Having quoted from an article dealing with the characteristics of farms which participated in a dairy competition conducted in the Adelaide Hills, in which it was stated that "nearly all of them had . . . irrigated pasture ranging from 2 to 14 acres", the author makes no attempt to point out that these farms were not really representative. In fact, relatively few dairymen in that area have irrigated fodder available. In quoting, without subsequent qualification, that "the yield of butterfat per acre reached as high as 370 lb." on the Murray Swamps, the author again leaves a false impression regarding the quality of farm management in South Australia, such yields being quite exceptional.

Nevertheless, *Rural Development in South Australia* does provide a unique historical account of the principal obstacles to rural settlement in this State, together with a record of the solutions offered, at each impasse, by scientists and administrators. The book should prove a useful point of reference for all who seek to explain the pattern of agricultural activity in South Australia.

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Farm Planning and Management. BY C. H. BLAGBURN. (London: Longmans, Green and Co., 1961.) Pp. ix + 372, 45/- stg.

Farm Planning and Management is an "important" book, in that it represents the full flowering of an intellectual system, albeit a rather muddy system, for raising farm profits. Here, at last, Mr. Blagburn has taken the space to give a full description of the derivation and use of his Enterprise and Whole Farm Efficiency Measures.

An Enterprise Efficiency Measure is a simple technical ratio such as milk per cow, or wool per ewe, or lambing percentage, or fertilizer per acre. A Whole Farm Efficiency Measure is the ratio of a weighted sum to a constant, such as:

$$E = 100 \sum_i c_i x_i / g$$

where E is the Labour Efficiency Index;

c_i is the Standard Man Days Per Acre for the i-th crop;

x_i is the acres of the i-th crop; and

g is the actual man days used on the farm.

Likewise, we might have:

$$E = 100g / \sum_i c_i x_i$$

where E is the Yield Index;

c_i is the Standard Output per Acre (or per head of livestock) for the i-th enterprise;

x_i is the acres (or number of head) of the i-th crop (or livestock) enterprise; and

g is the actual gross output of the farm.

The Standard Man Days Per Acre or Standard Output are average coefficients calculated for different types of farm by the English Provincial Agricultural Economics Service and available in *The Farm As A Business* or in Appendix II and III of Blagburn's book.

Starting with this technical concept of efficiency, and using intuition and experience, Blagburn and his co-workers in the United Kingdom have, during the last decade, helped many English farmers to earn higher incomes. At the same time they have developed habits of thought which have as little in common with production economics (and micro-economic theory in general) as Marx has with Ricardo.

Farm Planning and Management reveals that there is still no theoretical underpinning for the practice of calculating and using farm standards. This lack of theoretical framework leads Blagburn to plunge immediately into his real forte of giving simple advice, which is really of very little use when it does not refer to a particular farm. Thus in discussing "Specialization or Mixed Farming", Blagburn says:

"There has been a great deal of controversy in recent years on whether it pays the farmer better to specialise in one or two enterprises or to go in for a more mixed system of farming (p. 11) . . . The soundest policy for the individual farmer is to avoid being influenced overmuch by extreme advocates of either school of thought, and to maintain such numbers of main enterprises as he can conveniently carry on a scale sufficient to employ labour and machinery efficiently, bringing in subsidiary enterprises to use up any spare labour, acreage or by-product." (p. 13.)

The above quote is typical of Blagburn's prescriptive style of writing. His rules of thumb frequently are unobjectionable, but (as above) they are unlikely to greatly enlarge the intellectual horizons of his readers. Similarly, the economic principle that it is profitable to expand production so long as marginal revenue exceeds marginal cost, is illustrated without reference to the principle:

" . . . costings can be definitely misleading. In the first place, even when individual enterprises are concerned, it does not follow that the lowest cost per unit of output always results in maximum output. A dairy farmer for example, who can produce 20,000 gallons of milk at a cost of 2/- a gallon and sell it at an average price of 3/- will make a profit of 1/- a gallon, or £1,000. But if he **can** increase his milk yield per cow by 25 per cent so as to produce 25,000 gallons, even if the extra milk costs 2/6 per gallon (putting up his average cost to about 2/1¼), his total profit will increase by £125." (p. 28.)

Even a footnote reference to the economic principle being illustrated would greatly increase the usefulness of the above example. Almost unbelievably, Blagburn does not point out explicitly that so long as the cost of increasing milk production is less than 3/- per *extra* gallon produced, it will pay to increase production. Blagburn's system is the farm management of average relationships (albeit with the *caveat* that these can be misleading).

In place of economic principles *Farm Planning and Management* offers a series of indices which permit the farmer to compare his performance with the "standard" performance for similar farms in his region. The suggested indices include a System Index (to measure revenue per acre and unit of livestock), a Yield Index, Livestock Units per 100 acres, Forage Acreage per Grazing Livestock Unit, Livestock Output per Acre of Feed, Output per £100 Labour Cost, and a Labour Efficiency Index.

These indices, which are calculated in a number of different ways, are arranged so that all other things being equal, an increase in "efficiency" would increase profits. In fact, of course, there is no way of increasing the value of a farm's efficiency measures, whilst leaving all other things equal. Thus if the Yield Index is to be increased, more fertilizer must be used or harvesting must be done more carefully. *There is no a priori reason to believe that it will be profitable to make adjustments which will increase the System, Yield, or Labour Efficiency Indices.*

Farm Planning and Management seems to have the implicit assumption that an increase in "efficiency" is synonomous with an increase in profits. It is implicitly assumed that the objective of farm planning and management is the maximization of "efficiency" (and that this will maximize profits). This is, of course, very misleading.

The Efficiency Measures are useful in highlighting ways in which one farm differs from the average or "top" 25 per cent, but even for this purpose they are less useful than would be a simple list of technical characteristics such as per cent of farm in wheat, oats, 2 year ley, etc.; number of sows, hens, cows (and breed); milk yield per cow, fertilizer usage, crop yields; acreage of hay, silage, root crops, etc. Whether it will pay a farmer to change his farming system towards that practised by the "top" 25 per cent can only be decided on the basis of a budget. That such a change would increase certain efficiency measures, tells the farmer nothing about profits. Thus the Standard Output, and hence System Index (pp. 35-36), can be continuously raised by increasing the acreage of a crop (such as potatoes) with a high standard output. To which the reply might be that "common sense" should prevent the formulation of a farm plan with too high a System Index. But in the absence of economic analysis, one wonders how to judge whether the System Index is being made "too high".

The relationship of efficiency measures to the possibility of substituting capital for labour is brought out in the following quotation:

> "Some farm economists use a slightly different system of calculating labour efficiency in which the man-day factors employed for certain enterprises are varied according to the type of equipment used, e.g. lower figures for dairy cows where a parlour system is used, higher where they are hand-milked, lower figures for cereal crops harvested by combine, etc. There are however, two objections to this: (1) if allowances were made for all the variations in degree of mechanization, e.g. for pick-up balers, combine drills, forage harvesters, etc., the system would become excessively complicated; (2) the degree of mechanization is itself a factor in labour efficiency, e.g. a dairy farmer who hand-milks is using labour uneconomically and it is therefore unsound to vary the standard against which performance is measured to allow for these differences." (p. 53.)

The difficulty is not, of course, as easily disposed of as Blagburn suggests; the average man-days employed will vary not only with the method of doing a job, but also with the scale of operation. (Just as the System Index for the most profitable 25 per cent of farms (p. 37) differs with the farming system.) If the farm standards are intended to allow a farmer to compare his own performance with farmers producing as far as possible under the same conditions, then, of course, the standards should vary depending on the technology used, and the scale of operations. This would allow the farmer to compare his performance with similar farms. Or if the farm standards are meant to allow the farmer to estimate the effect of changed scale or technology on labour costs, or gross income per acre, then again the standards should be subdivided as finely as possible. It is only if the standards are meant to draw attention to differences in performance, without any attempt to explain them, that Blagburn's approach would appear to be correct. In any case, of course, the usefulness of even "correctly estimated" standards is doubtful, *tant pis.*

Farm Planning and Management describes a systematic method of looking for "weaknesses" in the performance of a particular farm as compared with standard performance (p. 56). This procedure concentrates on differences from standard performance, it does not explicitly consider the possibility of increasing profits within the context of the particular farm being studied. The entire emphasis is on bringing the farm into line with its peer group.

Having considered Farm Planning, Blagburn provides chapters on "The Economic Use of . . ." farm resources, labour, capital, feedstuffs and machinery. He then turns to "The Economic Production of . . ."

particular enterprises, sale crops, dairyfarming, cattle and sheep farms, and intensive pig and poultry enterprise. The descriptive style of writing in these chapters is illustrated by:

> "of course, good cowmanship as well as the quality of the cow no doubt contribute a great deal towards the yields obtained by the farms in the highest group. Nevertheless, there is everything to be said for starting off with good cows, even though the capital cost may be higher; and there are many dairy farms where, if the capital could be raised, it would pay handsomely to scrap the existing herd at once and replace it with better cows." (p. 194.)

An interesting implicit discussion of opportunity cost appears on page 104:

> "*Feeding Home-grown Grains.* In assessing the costs of feeding home-grown foods to livestock, the strict cost accounting rule is to charge them at cost of production. This method is sound enough for bulky forage such as kale or silage, which are grown for the sole purpose of stock feeding and which, in practice, cannot generally be moved off the farm. But, for easily saleable products, such as barley or oats, and possibly hay, it can be highly misleading. What the farmer wants to know is whether he will be better or worse off by growing and feeding home-grown cereals; and in making his decision he must take into account the fact that the grain if not fed could be marketed. The likely market price is therefore the appropriate figure to charge to the livestock for the home-grown food. Assuming a crop of 20 tons of feed barley has been grown at a cost of, say, £16 a ton and could either be sold for £22 a ton or used to replace purchased barley, at the same price, for feeding the farmer's pigs, the financial position would be precisely the same in both cases, i.e. either a profit of £6 a ton on selling the barley or a saving of £6 a ton on purchases. The production cost is clearly irrelevant."
>
> "The farmer may, however, argue that if he keeps his barley and feeds it to pigs he will make two profits — the profit on growing the barley and charging it to his pigs at the market price, and a further profit on converting it into bacon or pork. While this is strictly true, the argument is a false one, at any rate for the farmer with an established pig enterprise; for apart from a possible saving on transport costs, the same amount of profit would have been made on the pigs in any case by buying feed barley or its equivalent at the market price; the only profit resulting from the home-grown barley is the margin between its cost and its market value."

If the above quote was in response to an examination question, one would be inclined to award well over 50 per cent. A clear grasp of the principle of opportunity cost has been demonstrated, even though the underlying economic principle has not been mentioned. Unfortunately, as so often happens in an examination, the author concludes with a damning sentence!

> "The only case where the use of barley or other grain for feeding to pigs would lead to an *additional* profit, which would not otherwise be made, is where a farmer decides to buy in some *additional* animals, e.g. store pigs, to consume home-grown grain available on the farm, as sometimes happens when, for example, the barley market is depressed and the grain if sold would realise a poor price. This may often prove to be a sounder alternative than holding on to the grain in the hope of a price rise."

Farm Planning and Management concludes with sections on the Farmers Markets, and Farm Records. The chapters on the markets for farm products provide a useful review of the current methods of supporting English farm prices.

To sum up, *Farm Planning and Management* is a fascinating book. It reveals a fully developed discipline of farm management without production economics. Here we have a farm management text which makes no explicit reference to resource or product substitution (other than the need to have resources and products combined in the "right" proportions), which does not discuss the principle of opportunity cost, ignores the general nature of the production function, does not discuss discounting or taxation, and leaves the reader no wiser as to the principle of diminishing returns and the advantages of equal marginal productivity.

The book should be bought for libraries — for its curiosity value.

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Marketing of Agricultural Products. BY R. L. KOHLS. (New York: Macmillan Company, 1961, 2nd Edition.) Pp. xiv + 424, 73/6.

Elementary textbooks on agricultural marketing have by now fallen into a fairly standardised pattern: each has its chapter on price discovery, wholesaling, retailing, grading and standardisation, transport, storage, futures markets, etc., followed by a series of chapters on the major commodities. Teachers who prefer not to work from a single text, but to select the best treatment of each topic, will probably draw quite heavily on this revised edition of Kohls'. And, in addition to some very good chapters, this book has more cohesiveness than is commonly found in the standard texts on this subject.

Kohls uses a three-fold approach to marketing — analysis by function, by institution and by commodity, and integrates the three aspects quite effectively. Amongst the many advantages of the functional approach is that it forces the student to query the "head-counting" fallacy (particularly common among farmers) that the cornucopia can be achieved simply by eliminating middlemen. The institutional approach is complementary because "very often, the why of certain marketing practices must be answered in terms of the characteristics of who performed it". The commodity approach, combining functional and institutional analysis, helps focus attention on the differences in marketing which arise because of differences in the commodity or its production.

The distinction between operational efficiency and pricing efficiency is well-drawn and useful, especially as these are often competing goals. Speaking of decentralisation of marketing, Kohls points out that "there can be too many market points for maximum *operational* efficiency, as well as too few for maximum *pricing* efficiency".

The competitive model and the "invisible hand" thesis are briefly sketched and departures from perfect competition then discussed, without even an elementary foundation having been laid for demonstrating the effects on welfare of monopolistic competition. Apparently, the student is expected to accept as an article of faith that monopoly and restrictive practices are "bad things".

Since the book is aimed at the student with little or no previous economics, it is necessarily at an elementary level, but the "Selected References" at the end of each chapter provide good guide-lines for further study. These references, together with some of the charts, have been brought up to date since the first (1955) edition, and two new chapters have been added, covering the issues involved in expanding the market for food and in the marketing structures' changing organisation. The style is clear and readable, and all told the book can be recommended as one of the best in this field.

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