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Book Reviews

A History of Economic Thought. Social Ideals and Economic Theories from Quesnay to Keynes. By Overton H. Taylor. McGraw-Hill Book Company, New York. 1960. 524 pages. $7.75.

THE LAST FEW YEARS have seen the appearance of a number of good books concerned with the history of economic thought. If this indicates a renewal of interest on any appreciable scale, it is very much to the good, as study of this aspect of economics provides a certain depth, perspective, and understanding sadly needed by many economists and not otherwise obtainable.

The present contribution by Professor Overton H. Taylor of Harvard University is a work of profound and perceptive scholarship. As the editor says, it "embodies the fruits of his life-long studies and reflections, concerned with the history of economic theory *and* the relations of its main developments with the broad general patterns of philosophical and overall social, moral, and political thought, which have been their wider intellectual backgrounds or contexts."

The scope and content of the book stems from Professor Taylor's views of the nature of economic thought. He believes that it consists of a strictly scientific component that can be identified and separately described, but cannot be completely understood or evaluated without reference to "associated" political and social philosophies. Accordingly, he alternates descriptions of the economic systems formulated by some of the great economists with interpretations of relevant social-philosophical ideas and influences. This dual treatment of the subject matter means that it is possible to examine the ideas of only a relatively small number of economists. The final product, therefore, is a highly selective survey rather than a comprehensive history of economic thought.

The first three-fifths of the book (11 chapters) centers on the English classical economists, plus Karl Marx. Taylor's starting point is the 18th century "Enlightenment" (with special reference to Locke and Newton) and the Physiocrats. Then he turns to Adam Smith's forerunners in moral philosophy; namely, Shaftesbury, Mandeville, and Hutcheson. Smith's own ideas on science and philosophy are culled from his *Philosophical Essays* and *Theory of Moral Sentiments*. Against this broad background, the economic theories and policies of the *Wealth of Nations* are explained and evaluated. After a chapter on "Benthamism," the contributions of Malthus, Ricardo, Mill, and Marx receive similar treatment. This treatment, however, is at once so comprehensive and so intricate as to preclude any sort of summarization. One can only say that these economists emerge, not as narrow specialists concocting economic theories in a vacuum, but as wide-ranging thinkers gradually bringing their economic ideas into focus within a shifting framework of social philosophies and forces.

The final two-fifths of the book (6 chapters) is of a somewhat different character than the preceding portion. Not only does it cover a longer time span in fewer pages, but general developments during certain periods receive more attention than the economic systems of individual economists. In fact, only Marshall, Chamberlin, and Keynes get anything like the full-scale treatment accorded to Smith, Ricardo, and J. S. Mill.

Chapter 12, "Victorian Conservative Liberalism and Neoclassical Economics," provides a transition from the end of the English classical period to the arrival of Alfred Marshall. This is a very difficult period to deal with, but Professor Taylor has done a remarkable job of weaving together such diverse strands as 19th century liberalism,

the psychological approach, marginal analysis, and mathematical economics into a meaningful whole. In particular, he has been able to avoid the almost inevitable confusion that arises when one attempts to explain the period in terms of individual schools, such as the Austrian, Scandinavian, Walrasian, and so on. Next comes a chapter devoted to Alfred Marshall—mostly to a summary of his *Principles*. This is a careful, systematic job which retains many of the subtleties of the Marshallian analysis. Accordingly, it is not easy reading.

Chapters 14 and 15 deal with the conflicting ideologies and regimes that led to World War II, as well as those that are still with us. Specifically, Taylor surveys communism, facism, democratic socialism, and what may be termed "New Deal liberalism." Here again he covers and illuminates a long stretch of intellectual territory. I think too much space is given to demolition of the Communist theory of capitalist imperialism. We know the Communists' interpretation is hopelessly wrong, but they will never admit it. The sections on Fabian socialism clarify this episode in British economic thought, which has always been something of an enigma to many Americans. The brief concluding sections, which trace the metamorphosis of the social and economic climate of the United States from classical liberalism to the interventionist liberalism of the New Deal, are interesting and stimulating, but this is far too complex a subject to be presented satisfactorily in a dozen pages.

The two final chapters carry the same general title of "Recent Developments of New Economic Theories Relevant to Problems of Public Policy." The first centers on E. H. Chamberlin's *Theory of Monopolistic Competition*; the second on the Keynesian system. Here Professor Taylor focuses on two critical developments in modern economic theory which, though having their roots in the neoclassical schema, have had far-reaching policy implications at variance with some of the tenets of classical economic liberalism. The Chamberlinian analysis points to the prevalence of monopoly elements throughout the price system, implying that *laissez-faire* does not guarantee a predominance of competition with its alleged beneficent effects on economic efficiency and welfare. The Keynesian analysis uncovers certain flaws in the capitalistic process which prevent the automatic maintenance of the aggregate money demand for goods and services at a level sufficiently high to ensure continuous full employment of labor and other resources.

Though there should be little dissent with the selection of Keynes and Chamberlin (or, alternatively, Joan Robinson) as key figures in recent economic thought, these chapters leave one with a sense of incompleteness. In my opinion, two individuals are insufficient for the purpose at hand. This opens up numerous possibilities, but my tentative personal inclination would be to add at least Pigou and Wesley Mitchell, and a fuller treatment of Schumpeter's contributions. Mitchell I regard as especially important. He typifies the urgently felt need for a better factual knowledge of the economic process and is also a significant figure in American institutional economics. This movement, though it never produced a comparable body of theory, early recognized that the neoclassical analysis did not provide a fully satisfactory representation of the functioning of modern economic society. I would argue that it prepared the way for a ready understanding and acceptance of Keynesian and Chamberlinian ideas among American economists.

This book was not designed as a text, but the introduction notes its possible usefulness for this purpose. However, the relatively large space given to the English classical period and the high degree of selectivity throughout are likely to operate as limiting factors. Professor Taylor's hope that the book will be of interest to a wide variety of lay readers seems optimistic. One of the barriers here is the frequent appearance of extremely long and elaborate sentences, which seem almost like verbatim reports containing all the qualifications and nuances of the scholarly lecturer.

Such questions as I may have on particular portions or aspects of Professor Taylor's study do not alter the high opinion of the volume as a whole expressed at the beginning of this review. It is indispensable to any economist seriously interested in the history of his subject, and merits a place beside Schumpeter's *History of Economic Analysis* and Stigler's *Production and Distribution Theories*.

J. P. Cavin

Economic Theory and Organizational Analysis. By Harvey Leibenstein. Harper and Brothers, New York. 349 pages. 1960. $6.00.

PROFESSOR LEIBENSTEIN'S purpose in this stimulating work is to develop a theory of organization and to explore its applications to microeconomic theory.

In the first section, he gives a concise account of received theory covering demand, the competitive firm in the short run, the competitive economy in the long run, monopoly, monopolistic competition, and oligopoly. Although it is not strictly needed for the task at hand, the section provides a useful summary.

The author next considers the link between economic theory and organization theory: Specialization, considered as the division among workers of a set of activities that defines a process (not the subdivision of different phases of product output among firms, the usual concept of specialization in economics). The difficulties of knowing when a process is more specialized in one case than in another are explored, and some interesting suggestions for measurement are given.

He then launches his theory of organization. He follows the path of Chester Barnard and Herbert A. Simon, that is, he builds a few basic ideas on organization into a structure of thought. The unit of analysis is the *role*. Roles always appear in human organization because efficiency demands that activities be specialized and performed in convenient bundles. Eight role types are recognized, three of which (direction, linkage, performance) are basic to any organization, and three more of which (role-determining, player-determining and pay-off determining) are essential for an independent organization. Hence, there is a continuum of organizations from the less to the more independent. A firm is an independent organization whose destiny is determined by the magnitude of its total payoff, which in turn depends upon its total performance.

A role is a set of all permissible role interpretations, not a fixed or routine assignment. Almost anyone with a fixed assignment also enjoys contingent fields of action which provide scope for his overall activity in the organization. A role is all the possibilities of behavior in the assignment. An organization is a set of related roles in which the organization not only can perform but also can gather information about the changing environment and about possible changing capacities and activities with the organization. For such reason, it may be desirable to have more than one role interpretation within a role so that an individual can in fact shift from inferior to superior activities without redefining the assignment.

On such conceptual foundations the author considers in a sequence of chapters the authority-communications mechanism, the motivational elements, organizational equilibrium, and economical and efficient organizational structures. Many propositions are advanced and conclusions drawn. For example, a cogent discussion shows why it is meaningless to argue about centralization versus decentralization as an issue. One of the most important ideas advanced in the book is that large complex organizations need not be less efficient than lesser organizations. Large organizations may enjoy many advantages of specialization, particularly in administration. Production diseconomies usually can be avoided, as the organization expands, by replicating optimum size plants (and other suborganizations).

The final section of 79 pages examines some implications of what is reviewed above, for economic theory, particularly for firm growth, long-run cost behavior, and the stability and determinateness of ologopolistic competition. This is the payoff section for economists.

Professor Leibenstein's bold adventure has many interesting possibilities on several fronts. But for economists it remains to be seen how much his organization theory really improves the usefulness of conventional economic theory and how much it is another method of showing the deficiencies of received doctrine.

One major difficulty occurs to this reviewer. An important result of confronting economic theory with organizational theory is to enlarge the usual conception of the cost computations of the firm as it considers how to adapt its organization in the process of growing larger. This is an excellent idea. Yet one mistrusts where the author comes out with it. He sees no obvious cost limitations on how big the firm can get (other than periodic

awkward cost positions on its way up), if it goes about its business properly (except in the case of increasing cost industries).

The author holds at least one tenuous proposition favorable to his view; namely, that large organizations tend to attract the highest quality of personnel (page 193). Furthermore, he overlooks an important matter when he implies that market uncertainties in selling a firm's output can often be mitigated by sheer size and experience (chapter 16). The right insight is provided but only in another connection, when he says "the greater the size group . . . the more important a mistake may be, since it will affect a larger number of individual activities" (page 224). But one needs to apply this basic idea to enterprise investment as well as to direction of basic work teams. In the face of market uncertainties, diversification is sensible, particularly as a firm becomes larger. While a replication of optimum-size plants would avoid diseconomies, were the firm to expand its output of a product beyond the optimum for a single plant, this idea could exaggerate the attractiveness of this method of growth. It may be more attractive to diversify investment in ways that do not show up as a replication of production and organizational facilities.

This is part of a general difficulty. The author has not freed himself altogether from the limitations of neoclassical economic theory which (1) is limited to an industry defined as a group of firms making a single product, and (2) does not recognize asset composition and preference as important in decisionmaking. Consequently, some of the economic problems of the market are not really solvable within the framework of theory as presented.

Allen B. Paul

The Theory of Linear Economic Models. By David Gale. McGraw-Hill Company. 330 pages. 1960. $9.50.

PROFESSOR GALE is convinced that as a mathematical tool of economic research, the use of linear programming, and of the related linear models, is here to stay, and he has therefore prepared a textbook that presents the mathematical theory of the models most widely used in economics. Although the author uses economic data in his problems, he makes no attempt to evaluate the applicability of a particular model to economic situations, but he deduces in rigorous fashion the consequences of mathematical assumptions. In this presentation, with the related exercises, we find a mathematically unified treatment of many important proofs which were previously available only in scattered sources in the literature of economics and mathematics.

This book is an excellent text on applied mathematics for economic students who are fairly well-trained in mathematics. An economist interested in improving his mathematical skills could gain considerable knowledge by intensive study of the volume and by working through the practice problems. The mathematics beyond elementary calculus that is necessary for understanding the material is given in chapter 2. But a student needs to have ability to follow a moderately involved mathematical argument. This requirement will limit widespread use of the book for reference by individuals in the behavorial sciences whose training in mathematics is limited. These persons have a greater need for books in the theory of economics utilizing linear models as presented by Dorfman, Samuelson, and Solow in *Linear Programming and Economic Analysis*, or in methods of using linear models in research as presented by Heady and Candler in *Linear Programming Methods*.

Burton L. French

The Farm Management Handbook. Third edition. By I. F. Hall and W. P. Mortenson. Interstate, Danville, Ill. 425 pages. 1960. $6.00.

SINCE PROFESSOR FRED W. CARD published his pioneer text in the field of farm management in 1907, a long succession of textbooks designed to present the theory and practice of farm management have appeared. This reviewer has followed them closely through the years. They reflect both a steadily growing body of information useful in planning a profitable farm business and an intelligent appreciation of the increasing importance of management as a factor conditioning farm success.

Most farm management texts are designed as textbooks for classroom use. More than any of the other texts in this general field, this contribution of Hall and Mortenson is, as the title indicates, a handbook to guide the operating farmer in making wise decisions in the operation of his business.

The book is well written and attractively and effectively illustrated. It contains a wealth of factual information needed in farm planning. It presents in an interesting way the dynamic nature of this age-old business of farming, and stresses especially new developments in farm techniques and their role in helping farmers to meet the increasing demands on their managerial ability.

Although it is not all well adapted to use as a college text, this farm management handbook should prove useful in general high school courses in farming and farm management, where a less technical presentation of the subject is made. In the hands of instructors who do not have specialized training in the field of farm management, this work may, in fact, prove more useful than the type of technical text commonly used in college courses in farm management, especially those designed for majors in the field.

Surprising to this reviewer is the fact that the authors pass over lightly, or miss altogether, some of the important current techniques in the field of farm management analysis. They place little stress on factor analysis as a basis for detecting possible weakness in the farm business and they fail to emphasize the highly significant substitution method of building a better farm organization. This is the more surprising because of the senior author's long and fruitful experience in this field, first in his native New York and more recently in Wisconsin.

Another striking omission is the failure to discuss or consider the various types of farm management services—educational, cooperative, and commercial—that are now available on an increasing scale. These services are growing rapidly and seem destined to play a role of increasing importance as farming becomes more specialized. The reviewer hopes that some of the items missing in this third edition may find their way into subsequent revisions.

George A. Pond

Economics of Transportation. By D. Phillip Locklin. Fifth Edition. Richard D. Irwin, Inc., Homewood, Illinois. 874 pages. 1960. $10.65.

THE ESSENCE of transportation can be expressed simply—moving goods and people from where they are to where they should or want to be. But its impact on the Nation's business and social life is more complex and widespread than probably any other economic activity. For example, areal specialization of agricultural production depends upon the ability to ship products to markets. The growth of agricultural activity in one area as compared with another—such as oranges in California as compared with oranges in Florida—is vitally affected by the difference in transport costs from each producing area to each of the competitive markets.

Processing plant locations that are profitable at one time often become obsolete because of changes in the transportation setting. Prices of commodities are affected by transportation, not only as a cost item but more importantly as a stabilizing factor, because supplies may be diverted from depressed markets. Many inter-

regional price differentials are controlled largely by transport charges or cost of shipping.

The explosion of American cities was sparked by the automobile. Many of the central-business-district problems arise from traffic congestion, and the future of the urban complex will be greatly affected by future trends in transportation. The location and nature of wholesale and retail outlets are in a state of flux in response to new situations created partly by transportation.

Government is vitally concerned with transportation—with the construction, maintenance, and operation of such facilities as highways, waterways, and air navigational aids, with the regulation of rates, service and other aspects of public carriers, and with the protection of public safety. Government policies affect not only common and contract carriers; they also bear directly and indirectly on private transport.

Professor Locklin takes this broad view of transportation; he discusses almost the entire spectrum of economic and regulatory aspects. First he sets the stage by discussing briefly the economic significance of improved transportation, and the impact of freight rates on prices and location of industries. This is followed by a historical sketch of the development of transportation from Colonial days to the present. Slightly more than half of the book then is devoted to a rather full discussion of the theory of railroad rates, rate structures, policies, and regulatory decisions that have emerged from a long history of Federal and State commission action. This discussion forms a good background for understanding the briefer discussions in the book on other means of transport. The subject matter in the highway, waterway, and air fields is split functionally into two broad areas—promotion and provision of facilities on the one hand, and regulation of carriers on the other.

The first edition of this book appeared in 1935. Those who are interested in studying the evolution of a college text will be more than repaid by a review of each of the 4 editions that have been written during the last 25 years. The college student is the focal point for each edition. The flavor remains much the same, but the discussions have been sharpened and modernized. The multiplicity of issues that are involved in this broad field conflicts with the space limitations of a single volume. As a result, most of the discussions are condensed to a point where the reader may have the feeling that the book is a set of summaries. However, this is supplemented by "selected references" at the end of each chapter and extensive footnotes throughout the text, which lead to more detailed source materials. In addition to being a useful college text, the book should prove valuable as a reference work to anyone concerned with locational and distribution problems, though his interest in transportation in its customary context is slight.

Donald E. Church

Fundamentals of Forestry Economics. By William A. Duerr. McGraw-Hill Book Company, Inc., New York. 579 pages. 1959. $9.50.

DR. DUERR'S BOOK on the economics of forestry should find its place among such other industry treatments of economics as works on farm management or on the steel business. Along with current standard works on dendrology and forest mensuration, it should occupy a prominent place on the shelves of foresters, for economics is as important a tool in forest management as in logging engineering.

The dust jacket avers that the purposes of this book are "... to help the forester become a capable planner . . . and to help him become an intelligent witness to events around him. . . ." In his preface, Dr. Duerr says that he is writing to students of forestry, in college and out, although most readers will infer that the chief audience is intended to be college forestry majors who have enough room in their curriculum for a quick dose of economics.

As a college textbook on economics for forestry students, it accomplishes its purpose. It is chiefly a straightforward treatment of modern economic theory, with illustrations drawn chiefly from forestry firms, but the purist in economic theory can find points to quibble about here and there. For example, the statement that "the rate of interest is an index of the efficiency of investments over time, and of men's depth of time per-

spective . . ." could start a debate wherever economists meet. But any book on economics can set off lively discussion among economic theorists.

The college student without a fair head start in economic theory will find it tough going in places, even though the style is lucid. Dr. Duerr is to be congratulated on giving us a work on economics relatively free from the heavy style that characterizes so much of our literature. Readers can breeze through most of the book with relative ease.

The book is in 5 parts and 33 chapters, a good size for a 3-hour one-semester course, if students and professor hustle along on the heavier sections, and even for a two-semester course, if the treatment is more thorough. The introductory chapters tell something about both economics and forestry. A case is made for a special treatment of the economics of forestry by citing Dr. Henry Vaux to the effect that timber growing takes a long time, timber is both capital stock and finished product, and many forest values are not measured by ordinary markets. One can accept these premises with little argument, although to this reviewer a case need not be made for special-industry treatment of economics. Each industry, be it steel or dairying, has its unique characteristics and deserves good literature dealing with the application of economic principles.

Production economics, comprising part two, emphasizes the economic management of the timber-producing firm. The treatment is workmanlike and conventional but not especially new. One could easily substitute the word "farm" or "packing plant" for "lumber company" throughout much of the section. Such a substitution would make it an equally appropriate treatment of production economics as applied to other industries. Perhaps this demonstrates only that the principles of economics have a universality not often recognized by specialists in a given field.

One might wish for greater attention to the macroeconomics of forestry, including its relationships with other industries and its place in our total economy, rather than, or in addition to, the emphasis given the economics of the firm. But this expansion of the subject may have opened a Pandora's box of material not easily encompassed within the covers of a single volume designed as a text. One might also wish for some treatment of programing as a tool in production planning, as programing may have special adaptability and usefulness in forestry.

Part three deals with demand and marketing in a way that applies more specifically to forestry than does the previous section. This section should be of special interest and usefulness to the forester who is looking back on his bachelor's degree and ahead to successful operation in the business of supplying forest products to consumers. One would have expected Dr. Duerr to handle the subject of business cycles in a more sophisticated way. Variations (cyclical or not) in economic activity can occur in segments of modern industry. Some of these variations may have no relation to general business cycles but may influence forest industries significantly.

The five chapters in part four deal with institutions of the forest economy. The author first treats "centers of influence." This discussion is refreshing, for it recognizes, as economics textbooks rarely do, some of the realities of the political and social world within which we all live and do business—realities that inhibit or liberate our actions, and thereby prescribe bounds within which we move and beyond which we cannot go without cost or pain. Institutionalists of the John R. Commons influence will applaud.

The tenure question, treated with taxation and credit in part four, is handled chiefly from the viewpoint of the timber producer. It is to be marked down for failure to treat with those "sticks" in the tenure bundle on forest land held by interests of water, game, recreation, and so on. The chapters on forest taxation and credit are good, though the credit chapter fails to mention the lack of liquidity of growing timber as an important factor affecting the supply of loan funds to the forest-growing industry.

The weakest section is part five, which deals with the operation and planning of the forest economy. It describes briefly the forest economy of the world and deals with planning and broad social and economic problems. Without extensive supplemental reading it is doubtful whether undergraduate students would get more than a smattering of the processes and problems of public planning from this treatment, and experienced foresters at the policy level in either Government or industry will find little here that is helpful.

In total, the book is good and the style of writing especially pleasing, its greatest merit being use as a text for college courses. But those who have their college years behind them will find much to inform and stimulate them.

M. L. Upchurch

Rural Planning of One County—Worcester County, Massachusetts. By John D. Black and George W. Westcott. Harvard University Press. 419 pages. 1959. $9.50.

IN 1937, the authors of *Rural Planning of One County* joined forces with representatives of other Federal, State, and private agencies to undertake an intensive planning study of Worcester County, Mass. Although the special focus is on this county, the book has a broad field of interest, and it reflects the long experience of the authors in research, planning, and education.

In a sense, this book represents the climax of the senior author's comprehensive study of New England agriculture which he began during his first year at Harvard (1927–28). From that time until his death in early 1960, he worked on problems of this region as much as the many other demands on his time would permit.

In 1933, the junior author joined the staff of what is now the University of Massachusetts as extension agricultural economist. Except for temporary leaves of absence, he has continued in this work since that time. It is evident that both authors approached this task with a rich and intimate knowledge of the agriculture of the region.

The land resources and the historical development of Worcester County are described and analyzed in detail, including an analysis of the urban sector, which provides the market for farm products.

The analysis of Worcester County is fitted into the setting of New England agriculture as a whole by drawing on the reports of other studies of the region, especially "The Rural Economy of New England; A Regional Study," by John D. Black, 1950; "Planning One Town—Petersham, A Hill Town in Massachusetts" (actually one of the towns in Worcester County), by John D. Black and Ayers Brinser, 1952; and "Planning for Successful Dairying in New England," by Richard G. Wheeler and John D. Black, 1955.

One chapter in the book is devoted to the county land-use planning movement. Worcester County was selected as an "intensive planning county" in this nationwide program. Description of the national effort begins with the early work of the Program Planning Division of the Agricultural Adjustment Administration. It then traces the development of the "Mount Weather agreement" and the organization of the Division of State and Local Planning in the Bureau of Agricultural Economics to cooperate with the land grant universities in this endeavor. The authors conclude that the program of land use planning under the Mount Weather agreement would have been continued if World War II had not intervened.

The planning of individual farm and forest units is taken up in detail, by towns and by different sections of the county. Alternative farm-improvement budgets for modal-type case farms were worked out in 1938. The alternatives for each farm were discussed with the farm family, and on the basis of these discussions, the family selected the alternative plan that seemed best suited to its needs and interests. In 1945, the changes that had been made on the case farms were noted, and revisions in plans were made in view of changes in market conditions, family situation, and other factors. This step was repeated in 1954–55.

From the analyses of case farms and forest units, as well as from data on changes in each town, an attempt was made to project a program of development, area by area, and for the county as a whole. This is an essential step in any rural planning, and this book would be a more helpful guide to planning in other areas if this phase had been more fully developed.

In the last chapter, the authors make specific recommendations for approaches to rural planning, based on their experience as well as that of their associates in this work. Anyone concerned with rural development, conservation planning, or for that matter with any program of rural improvement, will find stimulating ideas in this chapter. Planning approaches are outlined in relation to policies, programs, operation, and evaluation.

Sherman E. Johnson

Seeds That Grew: A History of the Cooperative Grange League Federation Exchange. By Joseph G. Knapp. Anderson House, Hinsdale, N.Y. 535 pages. 1960. $6.50.

DR. KNAPP—Joe, as most of us know him—has demonstrated that a history can be scholarly without being dull and pedantic. He has turned out a most interesting, readable, exciting book. But it is obviously more than this. It is a penetrating analysis that will help anyone to understand not only the development of the Grange League Federation, but also the whole cooperative movement in the United States. Beyond this, it throws light upon the development of our entire marketing structure—whether cooperative or not. In a modest way, it even contributes to an understanding of the issues of "farm relief," whether by governmental assistance or by "self help."

Dr. Edwin G. Nourse wrote a short but illuminating foreword to the book, emphasizing the value of cooperatives as pacesetters, and commenting upon the close relationship between the G.L.F. and the agricultural colleges and experiment stations. Dr. Nourse was one of the early leaders in the cooperative movement. He actively opposed those in the 1920's who thought that farmer cooperatives could raise prices by monopoly controls. Rather, he foresaw that the lasting benefits of cooperatives would come mainly through better and more efficient service to farmers. Joe Knapp's case history of the G.L.F. is in the Noursean tradition.

The title, *Seeds that Grew*, is quite apt. From the start, the G.L.F. has emphasized better seeds. Before World War I, most farmers in New York State grew their own seed, or bought from neighbors. The supply and quality of commercial seeds were generally not dependable.

As early as 1913, H. E. Babcock (then the county agent for Cattaraugus County), formed a committee to pool seed orders and to obtain the needed amounts from reliable sources. It is this same H. E. Babcock who, more than any other single person, becomes the hero of the book, guiding the G.L.F. through many troublesome years. His little seed program, back in 1913, was only the beginning of a wide variety of services in purchasing supplies for farmers and in marketing the farmers' products.

Mixed feeds—especially those for dairy cattle and poultry—have always been among the most important supplies handled by the G.L.F. As in the case of seeds, the first effort was to find dependable sources of feeds of known quality at a reasonable price. This soon led the G.L.F. to adopt "open-formula" feeds. The formulas were obtained from the animal nutritionists at Cornell.

The open formulas took much of the mystery out of mixed feeds, so that farmers knew exactly what they were buying. But the open formulas sometimes reduced the flexibility of the feed business and made mixed feeds unnecessarily expensive. As J. A. McConnell wrote, in reviewing the early experience with open-formula feeds:

"Actually, we know now that a big feed pool of this sort, based on a fixed formula, was bound to bull the market. We finally got out of that deal by making what was called '20% Emergency Dairy,' based on a very cheap purchase of barley which happened to be plentiful and low priced that particular year. This experience pretty much wound up the feed-pool idea, and thus was born the flexible formula idea which G.L.F. has used ever since."

And Babcock, writing in 1923, stated: "We should build for the future on the basis of minimum protein content and maximum digestibility. With these two fundamentals in mind, we should then abandon the fixed formula, but not the public formula, and proceed to mix a feed that will hold a place for itself on the basis of economy."

This is one of many illustrations of lessons that were learned the hard way. As linear programers were to find 25 years later, feed mixing involves two sciences: nutrition and economics. Good feed must meet specifications for nutrients, but it must also be sold at as low a price as possible—taking advantage of whatever ingredients may be plentiful.

Many such lessons can be learned from Joe Knapp's fine book. To me, the most general lesson is that a business concern (cooperative or not) should keep flexible if it is to live through depressions and wars, if it is to grow and prosper, and if it is to give maximum service to farmers and to the public.

Frederick V. Waugh

Tobacco and Americans. By Robert K. Heiman. McGraw-Hill Book Co., New York. 278 pages. 1960. $7.50

THE IMPORTANT ROLE that tobacco has played in the history and lives of Americans is presented in this 278-page volume. The book is well organized, profusely illustrated, and engagingly written. The author has advanced degrees in sociology, has been a financial editor, and, for several years, has been with a large tobacco-manufacturing company. He knows tobacco history very well, and his training in sociology undoubtedly contributed much to this balanced and interesting account of the way tobacco has been intertwined with the lives of Americans for the last 450 years.

The first of the eight chapters in the book gives an account of the discoveries of tobacco by Europeans during the voyages and explorations of Columbus, Thevet, Verrazano, Hawkins, and others. Following this, the author carries us through the early Spanish, French, Dutch, and English rivalries in the New World and highlights the early uses of tobacco in Europe in those times. The major role played by tobacco in the economies of the English colonies of Virginia, Maryland, and Carolina is then developed. Great figures in early American history appear—Patrick Henry, George Washington, Thomas Jefferson, James Madison, and others—as they move toward establishing a new nation. Tobacco in one way or another impinged significantly on the lives of many well-known leaders in the Revolutionary period.

Chapter four tells about tobacco in New England from the early period of the Yankee traders. Much of this chapter is devoted to the early development of the cigar and its big gain in popularity in the 19th century. Next, the author traces the part played by tobacco as the Nation grew westward "across the Appalachians"—the new producing areas in Kentucky and Tennessee—and the large consumption of tobacco in the form of chewing products. We then follow tobacco through the Civil War period and its commercial revival following the conflict.

The author traces the story of the tobacco industry in New York City from New Amsterdam to the beginnings of the cigarette era, and we are brought into this century to see the fascinating growth of the modern cigarette industry. The triumph of the American blended cigarette, the rivalries of the brands, the part played by tobacco in the two World Wars, the Government program of crop control, the advent of filter tips, and other related topics are touched upon.

There are 10 clear charts showing consumption of the various tobacco products, burley tobacco leaf prices, taxes collected on tobacco products, and total exports of leaf tobacco over a long span of years. Only a few minor errors in the author's sparing use of statistics in the narrative were noted by this reviewer.

This volume contains some shrewd observations on the economic aspects of tobacco throughout its long history. The author also has some pertinent comments on present-day economics of the tobacco industry. Most students and observers of the tobacco industry will agree with the interpretations made on most counts. But the treatment accorded the crop-control program has the tinge of the tobacco buyers' slant and tends to gloss over the difficult problems that have confronted the 600,000 tobacco growers of this country.

A splendid feature of the book is the remarkable collection of illustrations, including both reproductions of photographs and sketches, which number about 300. They occupy parts of nearly every page and, together with the fine writing style of the author, make this an interesting book for anyone who has even the slightest interest in tobacco and its history. Finally, a detailed index contributes significantly toward making the volume one of lasting usefulness.

Arthur G. Conover

Manioc in Africa. By William O. Jones. Stanford University Press. 315 pages. 1959. $6.75.

WHY WRITE a 315-page book on manioc in Africa? At least two good reasons can be given: Manioc is the staff of life of the African population, and no one had written a book on manioc in Africa—at least, not a full length modern book in English.

Manioc is also known as cassava, tapioca, yuca (not yucca), aimpim, and mandioca. Dr. Jones has chosen the term "manioc" because it is the same in English and French and is as well known as any other term.

A Brazilian crop, manioc (cassava) was introduced into Africa in the 16th century by slave traders and has since spread throughout Africa south of the Sahara and north of the Zambezi River. It is now an important crop to about 65 percent of tropical Africa's population and is a casual crop to many more, according to the author of this work.

A semiwoody, shrubby plant, manioc grows 5 to 12 feet high. A perennial, it is usually allowed to grow only 18 to 24 months. The stem is rather fragile and pithy. The plant grows leaves, flowers, and fruits, but it is valued chiefly for its starchy underground roots.

At the time of harvest, manioc contains a poison —prussic acid—in its roots, branches, and leaves. Customarily, the quantity of prussic acid in the edible parts of the roots is the criterion that determines which are the "sweet" and which the "bitter" varieties. Bitter varieties contain more prussic acid than sweet ones. But the variety and the external appearance of the plant are not true indicators of prussic acid content, according to the author. The prussic acid content, he indicates, "varies markedly with growing conditions, soil, moisture, temperature, perhaps altitude, and with the age of the plant." Roots with a high prussic acid content must be steeped in deep, gently running water to remove the poison. After steeping and peeling, the fibrous center part is removed, and the roots are dried and pounded into flour.

Manioc has a rather bland flavor. It is usually eaten with pepper or meat sauces or with vegetable oils and plant leaves. It has several advantages—high calorie yield per acre, good growth in poor soils, drought and insect resistance, and adaptation to good ground storage. But manioc is poor in all human nutrients except starch, and it is alleged to be a soil depleter.

Even so, the author feels that to condemn manioc because of its low protein and fat content is no more logical than to say "that beef has little nutritional value because of its low starch content."

"In fact," the author goes on with a touch of humor, "it is an old adage of nutritionists, or at any rate it should be, that there are no bad foods, only bad diets."

In his book, this eminent economist, a professor in the Food Research Institute of Stanford University, writes first of manioc (cassava) in general; of the land, climate, and peoples of Africa; and of the history of manioc's introduction and spread throughout Africa. Then, in two chapters, he tells of present-day methods of cultivation and preparation for eating. At this point, he takes a regional approach and discusses manioc in the Congo region (Belgian Congo and neighboring countries), Guinea (West Africa from Nigeria west), and East Africa. In a final chapter, "Manioc in a Developing Economy," he sums up his thoughts on a subject to which he has devoted much time and research. Here he also suggests that manioc may in time become a low-cost animal feed, for hogs especially.

The book is extensively documented. Chapter 6 alone lists 83 citations, wisely so-called, rather than "references," for many of the author's sources are not available to most library users.

If any reader of this review has plans for a book on manioc in Africa, he should lay them aside. *Manioc in Africa* should be the definitive book on the subject for the next 30 years, at least.

Snider W. Skinner

Industrial Estates: Tool For Industrialization. By William Bredo. The Free Press, Glencoe, Illinois. 243 pages. 1960. $6.00.

ALTHOUGH the establishment of industrial estates has recently become one of the major tools for effecting orderly industrial development, this institutional arrangement is not an innovation of recent origin. The idea, born in England at the turn of the century, has found expression in the expanding numbers of industrial estates in the United States as well as in many other countries throughout the free world.

The experience of industrial estate promoters has been generally favorable. Well-organized estates have been found to offer external economies to small- and medium-sized industrial establishments. Bredo's concept of "nursery" factories is intriguing. Small factories located on the estates are provided ample space to grow as they are nourished by the external economies which the estate provides. This is only one of several features that have contributed to the ready acceptance of this tool among underdeveloped countries now attempting to achieve further industrialization. Presumably, a study of the experience record of industrial estates will provide guidelines to those who plan to use this device both here and abroad.

This is what Bredo does in *Industrial Estates.* He presents a lucid expository account of the growth of these estates, including several "how to" chapters, and an extensive appendix. The appendix provides numerous actual case descriptions, as well as examples of typical agreements consummated by estates and their tenants.

Bredo's *Industrial Estates* should attract a wide audience. The general reader, the researcher, and the area development specialist will find a nontheoretical frame of reference applicable to his area of interest.

Agricultural economists, particularly those who work with the Rural Development Program, will be able to apply the Bredo work to their studies. Many researchers concerned with the low-income problem in agriculture regard industrial development as a partial answer to the underemployment problem in low-income areas. But the limitations of the industrial estate technique must be borne in mind, for example, the establishment of industry in estates presupposes that the problems associated with choosing industries to be appropriately located at the proposed estate site have been surmounted.

As do many studies that chart the pathway, Bredo's study raises numerous questions. We would be interested to learn how industrial estates may affect the cost structure of plants locating there, vis-a-vis their competitors. The information contained in this practical volume might well be applied to the increasing body of locational theory. Perhaps answers to some of these problems will be forthcoming in later studies.

Paul R. Kulp

Selected Recent Research Publications in Agricultural Economics Issued by the United States Department of Agriculture and Cooperatively by the State Colleges [1]

ANDERSON, KENNETH E., AND HAWES, RUSSELL L. THE HOUSEHOLD MARKET FOR SELECTED CANNED FRUITS AND VEGETABLES. U.S. Dept. Agr. Mktg. Res. Rept. 427, 33 pp., illus. Sept. 1960.

More than half of all families bought canned peaches, fruit cocktail, snap beans, corn, and peas during the 12 months studied. About 6 out of every 10 families bought peaches and almost as many bought fruit cocktail. Slightly more than half bought snap beans, and 7 out of every 10 bought corn and peas. Purchases of most items were lower in the South than in other parts of the country.

BARKER, R., AND HEADY, E. O. ECONOMY OF INNOVATIONS IN DAIRY FARMING AND ADJUSTMENTS TO INCREASE RESOURCE RETURNS. Iowa Agr. and Home Econ. Expt. Sta. Res. Bul. 478, pp. 747–764, illus. May 1960. (Agr. Res. Serv. cooperating.)

Under the prices and costs assumed, the breakeven point at which price per unit just equals cost per unit

[1] State publications may be obtained from the issuing agencies of the respective States.