BOOK REVIEWS

Social Indicators and Social Theory: Elements of an Operational System

By Karl A. Fox. A Volume in the Wiley Series in Urban Research, edited by Terry N. Clark. John Wiley and Sons, Inc., 605 Third Avenue, New York 10016. 328 pages. 1974. $14.95.

The author implicitly assumes that our societies (however defined, aggregated, or disaggregated) are so important to us that we ought to know more about them. They are so important, in fact, that we should be able to make formal accounting statements of resources, inputs, and outputs, and to make better informed judgments about social performance, much as we do about the economy (which is a part of society). And we should have a meaningful set of social indicators with which to monitor social well-being and social progress.

Toward this end, Fox then observes that there is significant, and perhaps sufficient, social theory already available and a large amount of data already being collected. The real point of the book, I think, is to plead for the development of method so that the relationships of indicators to each other can be examined in a framework of social accounts reflecting, in the aggregate, an integrated social perspective. Fox supports this contention by pointing out what the development of the National Income Accounts did for the selection and interpretability of economic indicators.

To add method and system to social measurement, Fox characterizes social operations in a manner analogous to economic operations. Abstracted from most complexities, behavior settings are characterized as markets, or production or consumption sites. Then what is needed is an "envelope" measure of an individual's social activity. In Fox's words:

> In this book I have proposed the concept of an individual's total income and have made some suggestions regarding how it might be measured. The equivalent dollar values of total incomes can be aggregated over individuals to yield estimates of total income for families, communities, regions, and nations. These total incomes are estimates of the "boundaries," so to speak, of the respective social systems.
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> Within such a boundary, the relationship of various social indicators to one another can be appraised and models of various subsystems can be interpreted in relation to the whole . . ." (pp. 257-258).

Most of the actual discussion in the book argues that the measurement and analytical system proposed are generally applicable—with illustrations in terms of institutions and societies of various kinds, locations, and levels of aggregations.

This is an ambitious book, and one must keep his wits about him to keep from getting lost in it. I think the author recognized this, and provided two road maps—one at the beginning and one at the end. The one at the end, chapter XIV, was the more useful for me.

Any person seriously concerned with describing and analyzing human behavioral systems should read the book. Perhaps it tries to organize more than can be organized and digested at this time, and the proposals it contains are bound to be controversial. It will, for example, be interesting to observe the reactions of social scientists from other disciplinary fields to an economist who asks "why can't you be more like me," and then offers a methodological gambit which amounts to a direct challenge. Fox's proposals, if acceptable, would indeed render the metrics of other human behavioral systems and institutions similar to those used in economics.

The construction of a measure of total income and characterization of "social markets" (my term) are especially provocative, and they should merit extensive professional dialog.

Eldon E. Weeks

Waterfowl and Wetlands: Toward Bioeconomic Analysis

By Judd Hammach and Gardner Mallard Brown, Jr. Published for Resources for the Future, Inc., by the Johns Hopkins University Press, Baltimore, Md. 21218. 95 pages. 1974. $7.

A necessary component of resource economic analysis is the evaluation of economic tradeoffs of alternative uses of resources. Hence, the value of an additional unit of the resource, whether it be land, water, labor, or waterfowl, needs to be determined. This book looks at the difficult problem of valuing existing prairie wetlands for waterfowl and explores the questions of how many waterfowl and ponds are appropriate in a dynamic setting. The book makes three important contributions to the field of resource economics: (1) a theoretical and empirical framework for linking economic and biometric information; (2) empirical estimates of the marginal value of wetlands together with estimates of optimal number of ponds, breeders, and seasonal kill; and (3) a limited discussion of policy implications of optimal management programs.

The book contains only 95 pages and six chapters, and one wonders if it would normally be considered a technical bulletin or monograph. The text is well written and organized. It presents a brief review of the problem, and a review of the literature dealing with alternative methods of valuing outdoor recreation; develops a theoretical framework and empirical results for the valuation of waterfowl; develops a theoretical model and empirical results for the biometric relationship of mallards; uses the developed information to provide a cost-benefit anaylsis; and discusses some policy implications, limitations, and recommendations for future studies.

The authors should be commended on their approach to an important economic and biologic resource problem. Their work ties resource demand and supply together with optimal management programs. This type of analysis has been lacking because of the amount of information available on the supply side, in particular the biological relationships, and the problem of estimating demand functions for natural resources. Future research and planning involved with water and related land resource should not treat fish and wildlife values as a nonquantifiable externality or indirect effect, but treat these resources as primary outputs. Considering the Water Resource Council's "Principles and Standards," such a measure of tradeoffs will be mandatory for developing plans under two objectives and four accounts.

The book is based on a survey of 4,900 hunters during the 1967-68 season. The questionnaire and comments of respondents are presented in the appendix. The questionnaire attempts to elicit an estimate of both willingness-to-sell (through a hypothetical sale of hunting rights for a season) and willingness-to-pay variations of consumers' surplus. The data are analyzed using regression anaylsis on various equations and forms of equations. The book then switches from economics to biometrics and develops the theoretical model for waterfowl production and survival functions. After determining maximum physical sustained yield and the steady-state mallard kill at various levels of breeding population, the optimum harvest is determined.

One of the more interesting results is the insensitivity of the kill to the number of breeders, holding the pond count constant. Although this insensitivity has long been known, the authors give the following quantitative results: "... increasing breeders 100 percent from 5 million yields a harvest increase of only about 11 percent. On the other hand, increasing the number of ponds while holding the number of breeding adults constant, shows that 114 percent increase in ponds yields a 69 percent increase in harvest."

Chapter 5 discusses optimal management programs by combining the biometric information with the marginal valuation of waterfowl. Assuming that the marginal value of the bagged waterfowl is \$3.29, 2.7 birds per acre are produced, hunters shoot 2.05 of the birds and still maintain breeder population (using the steady-state equation), and 80 percent of the birds are bagged, then the value of wetlands is \$5.40 (1.64 x \$3.29). This value compares favorably to Canadian wetland easements averaging \$4.72 per acre. Discounting at 6 percent, an asset yielding \$5.40 has a present value of \$90 which compares favorably with wetlands valued at \$25 to \$50 per acre in the Dakotas and western Minnesota.

Although these values are not exact, the reader feels that given the theory and empirical work they are a fairly good estimate. More important, the work represents one of the first attempts to join economic and biological relationships to determine the optimal number of ponds, breeders, and seasonal kill, together with a benefit-cost anaylsis of wetlands. This work definitely has made a contribution to resource and bioeconomic analysis and would be an excellent reading assignment for a graduate course in resource economics.

Robert B. McKusick

The Agricultural Systems of the World: An Evolutionary Approach

By D. B. Briggs. Cambridge University Press, New York 10022. 358 pages. 1974. \$7.95

Traditionally, agricultural innovations have been slow to come about; indeed, on appearances, the agricultural sector of our economy might seem transfixed in inertia. Accordingly, when some degree of change occurs it is dramatic by contrast to other sectors, and usually what by historical analysis would be classified as an evolution is by impression a revolution.

To understand the current situation in agriculture is essential to know how modern agriculture evolved. The objective of this book is to describe the major characteristics of agricultural regions of the world and to explain how they were formed. To a large extent the objective has been achieved but at a trying expense to the reader, who must wade through dull statistics and narrative.

The most significant factor determining the current distribution of the major types of agriculture was the slowness of the technical changes in agriculture until the 19th century and the limited areas in which the new techniques of the 19th and 20th centuries have been adopted.

Until the 17th century there was little difference in agricultural activity among the farm communities of Europe, India, and China. Then some slight changes appeared, but the major breakthrough came in the 19th century with the introduction of laborsaving machinery. This was largely attributable to increased migration to towns late in the century which caused a decline in agricultural population, thus compelling farmers to adopt mechanical devices. Essentially what the author contends is that the increase of population has caused

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the intensification of agriculture and thus led to changes in the type of farming in a particular area. However, though these changes initially came in the later part of the 19th century, they were not widely adopted until the 1930's. This was a period of agricultural revolution in Western farming. Simultaneously, higher incomes led to a shift in demand from grain to livestock products, vegetables, and specialized tropical products, while factories generated a demand for cotton, wool, jute, rubber, and vegetable oils.

While Western farming was being revolutionized, the agricultural tradition in Asia, Africa, and a large part of Latin America was basically unaltered. The peasant farming system of those areas has varied little from the past, compared with the Western agricultural world. Regardless of area, the past is firmly imprinted in the minds and ways of the farm communities all over the world—although perhaps a little less now than formerly.

Jack Ben-Rubin

The Hoover-Wilson Wartime Correspondence, September 24, 1914, to November 11, 1918

Edited by Francis W. O'Brien. Iowa State University Press, South State Avenue, Ames, Iowa 50010. 297 pages. 1974. $7.95.

Many of the problems discussed in this book have parallels today: political implications in relief exports of food; practicability of an international food bank; allocation to domestic consumption vs. overseas markets; farmers holding commodities for higher prices; dissatisfaction with price levels that lag behind costs; and control of excess profits, to mention some of those most related to agriculture.

The outbreak of World War I has presaged economic and social problems unmatched in history. Herbert C. Hoover, who was later to become head of the United States Food Administration, Secretary of Commerce, President of the United States, and an authority on administrative management, received wide recognition for his relief work in wartorn areas.

While theses and books have been published about Hoover and by him, only William Starr Myers has previously published papers relating to Hoover's presidential administration (*The State Papers and Other Public Writings of Herbert Hoover*, 2 vols., New York, Doubleday, Doran and Co., 1934).

Francis O'Brien, Director of Academic Programs for the Hoover Presidential Library Association at West Bend, Iowa, has done admirable work in compiling the first of several volumes of correspondence between Herbert Hoover and President Wilson. Entries are in strict chronological order, thus separating the initial letter from the reply.

Unfortunately, those using the book will find the index not as inclusive as they may wish. Its three pages have no commodity entries. Many names are not covered. Even the Food Administration is only sketchily covered, with nothing on its organization. An entry is given for the Price Fixing Board, but entries on prices are scattered under names of key figures such as Hoover, Secretary of Agriculture Houston, or Senator T. P. Gore.

Nevertheless, O.Brien's compilation offers insights that give greater understanding of today's economic problems in American agriculture.

Vivian Wiser

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