BOOK REVIEWS

Institutions in Agricultural Development

Edited by Melvin G. Blase. Iowa State University Press, Ames, Iowa, 50010. 247 pages. 1971. $5.95.

This book is an outgrowth of a project initiated in 1967 by the International Rural Institutions Subcommittee of the North Central Land Economics Research Committee (NCR-6).

The objective of the book is to provide "a comprehensive view" of the institutions that are most important to the agriculture of the developing countries. Eleven different types of institutions are discussed by 32 authors and discussants. The book, in my judgment, falls short of its objective, even though it contains much that will interest those concerned with technical assistance.

For the most part, the authors and discussants focus on what the respective institutions do. Only slight attention is given to administration and management—how they do what they do and how they are organized to do it. The article by Nicolaas Luykx on "Rural Governing Institutions" is one of the few exceptions. It focuses on both the processes which flow through institutions and the structures of institutions.

Neither the editor nor the distinguished contributors attempted to grapple with the key problem of setting priorities among institutions and changes within institutions. This is a serious omission. Priority determination is central to development efforts. At the least, it should have been possible for the authors to have outlined a framework for comparison and analysis with which to determine priorities. Its omission suggests that our knowledge of institution building is still extremely limited.

While 11 types of institutions are included, others such as tax systems, ministries of agriculture, State and national legislatures, and judicial units dealing with agriculture are omitted. Why? Let me suggest one possibility. Of the 32 contributors, over two-thirds are professors in U.S. universities. For a long time, institution building has largely meant "what U.S. universities do overseas." It seems to be virtually forgotten that institution building occurs outside of university contracts, too, or at least it should.

Erven Long asks if U.S. foreign assistance policy should be concerned with the functioning of factor markets in developing countries. He does not offer an answer. Even so, his discussion includes important insights for those concerned with factor markets.

C. J. Martin discusses the appropriate organizational location of the planning function. "Where the economic policy control is exercised" is the answer. G. Edward Schuh constructively identifies five factors which reduce effectiveness of planning institutions.

The relevance of land grant institutions to the developing countries is debated. Ruttan opts for the foundation-type research institutes. Blase counters by suggesting that a comparison of foundation programs in countries not mentioned by Ruttan to selected university contract programs focusing on institution building would give a conclusion opposite to that reached by Ruttan. In all of this discussion, I was impressed that no reference was made to the fact that while the International Rice Research Institute (IRRI) and the International Maize and Wheat Improvement Center (CIMMYT) have been "international" in scope, their management and administration were American, virtually unfettered by the management and administrative approaches of the developing countries. This arrangement, of course, contrasts sharply with that encountered in technical cooperation among U.S. and foreign universities and U.S. and foreign government offices.

Management and administration can, of course, have an overwhelming influence on institutions in agricultural development. It is surprising that they did not receive more attention in this book. They must receive high priority in institution building in the future and books on the subject by university professors or Government bureaucrats should focus on them.

Lyle P. Schertz

Agricultural Development: An International Perspective

By Yujiro Hayami and Vernon W. Ruttan. The Johns Hopkins Press, Baltimore, Md. 21218. 307 pages. 1971. $10.

Part I of this book might have been subtitled "an encyclopedia of agricultural development theory." The authors demonstrate by their outline and analysis of

development theories that the dearth of publications of a decade ago has been filled to overflowing.

The authors build selectively on the theories of others in formulating their theory of induced innovation. Price is central to their thesis as the mechanism by which changes in supply and demand signal the opportunities for economic gain. Dialectic interaction between producers and innovators results in the development of new technologies to overcome the constraints on production. Artificial manipulation of prices by Government policies distorts the signals and frequently leads to a misapplication of resources, and the failure of developmental efforts.

Innovation by research scientists and administrators in the public sector is motivated by hope of reward in terms of professional recognition, which is influenced to a marked degree by the economic returns accruing from the adoption of the innovation.

In agriculture, technological and institutional innovations must be adapted to changes in resource endowments and in product demand of a particular place at a particular time in economic history. Therefore, research and development programs must be decentralized to the microlevel but must have satisfactory linkages to the larger country, regional, and world scientific and technological communities. The research and education capabilities of a society are critical factors in its development.

The authors identify two principal constraints on production: Scarcity of land and scarcity of labor. The former are operative in the less-developed countries of southeast Asia while the latter are operative in most of Africa and Latin America. Limitations of land may be overcome by increasing biological and chemical inputs while constrictions due to labor shortages may be overcome by mechanical inputs. At higher levels of production, these factors become complementary and supplementary, particularly after industrialization of the country.

However, unless the human resources at all levels—the farmer, the scientist, the businessman, and the public administrator—are sufficiently well developed, the opportunities for increases in productivity will not be recognized or wrong choices may be made. Such failures partially account for the agricultural productivity gap among countries.

The authors validate their theories both through econometric techniques and through the examination of historical developments in various countries. Developments in Japan and the United States are chosen for detailed examination, as they represent the two extremes of land resource constrictions and labor scarcity. However, some of the briefer analyses, such as the transfer of rice technology from Japan to Taiwan and Korea during the 1920's and 1930's, provide strong support for their theories. The example of Denmark's adjustment from a grain exporting economy to a meat and dairy exporting economy at the end of the 19th century provides some useful insights for dealing with second and third generation problems of the "green revolution." However, the authors stress that the direct transfer possibilities of the experiences of others are negligible because conditions are never perfectly replicated.

Hayami and Ruttan have made an important contribution to development theory. Their microeconomic approach to the analysis of development processes presents a strong challenge to macroeconomic theories such as W. W. Rostow's "stages." The macroplanning which has dominated much of development planning in recent years is diametrically opposed to the reliance on a free market advocated by the authors.

Jane M. Porter

Developing the Third World: The Experience of the Nineteen Sixties

Edited by Ronald Robinson. Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022. 289 pages. 1971. $13.50.

The papers in this valuable collection are concerned with what might be termed the practical politics of developing the third world. The task addressed was to correlate economic priorities with political and human needs, all of which are in competition with scarce resources. It is abundantly clear that each author has experienced some of the hard realities and frustrations of struggling to promote a country's economic growth. The articles are notable for their insight and clarity of presentation. The discussions of the many cases of failure in the programs and the limited cases of success present an imposing critique of development policies of the past decade; more important, however, the articles offer implications for the 1970's.

A major concern of the developing nations' leaders has been the proper developmental role of industrialization as compared with agriculture. Papers from the early 1960's usually gave a great deal of weight to high capital-output ratios as the overriding need to most efficiently maximize output, employment, and the social welfare. Not surprisingly, therefore, public investment funds were repeatedly preempted by industrial projects. The agricultural sector, which in developing countries

often provides a livelihood for over half of the population, received lip service but little else.

However, there were several catches to this "industry first" theory. If investment was used for import substitution of consumer goods, it would not earn foreign exchange but only provide one means of saving some. On the other hand, it would require heavy initial and continuing capital goods imports. The ability of the nation to compete in world markets would depend heavily on preferential treatment from the developed nations. And, finally, inefficient, small-scale industrial operations could only burden the national economy.

It was expected that the internal savings necessary to finance capital investments would come largely from agricultural surpluses. Unfortunately, this anticipated surplus was doomed by rates of population increase that outstripped gains in output and productivity. Even with birth control, it is doubtful that this source of savings would have been able to pay the heavy capital costs of modern technologies.

By the middle of the decade, such realizations had led briefly to the "agriculture first" theory, which stressed that the quickest way to industralize was to concentrate on agriculture. Equally serious difficulties here led to the recognition that development could only take place if there were an explicit reciprocity between the two sectors.

Regardless of the economic logic of the development plans, in the various countries it became apparent that effective popular support would be crucial to even approaching desired targets. It was found vital, both politically and economically, to minimize urban unemployment and to keep the underemployed in the rural areas. Increasingly, proposals were heard for intermediate technologies and labor-intensive developmental activities in rural areas.

Other major issues covered in the papers included the role of the public sector. Specific attention was given to mobilization of domestic resources, the urgent need for more taxation and greatly improved tax administration, and the ineffectiveness of public administration.

The creation of protected regional markets through the integration of national economies was only mentioned briefly by the contribution in connection with industrialization. This movement offers tremendous economic potential, but presents awkward political problems. The papers commented only tangentially on the importance of the "social" sectors of housing, health, environmental sanitation, and education. Nor did any of them deal specifically with the sectors of economic infrastructure—transportaton, communications, and power. A third area which should have merited considerable discussion is the ever-growing debt-service, attendant repayment difficulties, and probable need for extensive debt renegotiations.

In spite of these omissions, the reviewer found the volume most interesting and quite timely, especially at this juncture of the U.S. foreign aid program. The authors of the papers believe that too much "aid" has been given to subsidize the exports of donor countries or to serve diplomatic, strategic, or military purposes. Too little has been channeled into social and economic assistance.

John Sutton

One Hundred Thousand Tractors

By Robert F. Miller. Harvard University Press, Cambridge, Mass. 02138. 423 pages. 1970. $12.50.

Miller's principal concern in this book is the administration of the machine-tractor stations (MTS) in the Soviet Union. The MTS were the main source of mechanization and a key device for the dissemination of agricultural technology in Soviet collective agriculture from the late 1920's to the late 1950's. The book takes its title from a quote by Lenin in 1917, wherein he expressed his belief that widespread agricultural mechanization in the form of tractors would greatly help in persuading the Russian peasant to accept Communism in the form of collective agriculture.

As it eventually turned out, the tractor was called upon as an emergency measure to bolster agricultural production, which suffered from a catastrophic reduction in the number of draft animals during the collectivization drives of Josef Stalin. Moreover, the MTS became agencies for tight control over agriculture because the collective farms were required to pay the State-controlled MTS in kind for the tillage and harvesting operations performed for them.

Using a broad data base, the author has compiled a concise yet colorful history of the MTS and a detailed account of the evolution of Soviet agricultural administration. The book contains a minimum of statistics, as it is concerned more with political than economic descriptions of the MTS. This is as it should be, since the MTS were both created and liquidated in summary fashion when compared with most of man's administrative mechanisms of 30 years' vintage.

The author demonstrates that ideology can be, in the Soviet Union just as elsewhere, made subservient to practicality when necessitated by crisis. Instances where purely economic considerations have influenced Soviet

policy are amply illustrated, as in the case of Khrushchev's disdain for the MTS as an inefficient supplier of commodities relative to other sources available to the Soviet State. Khrushchev's impatience at the notion of "two bosses on the land" (kolkhoz chairmen and MTS directors) is well documented, and the author's description of events and speeches leading up to the final demise of the MTS is excellent.

Also valuable are the insights gained by the author through interviews with Soviet agricultural specialists familiar with the MTS. Some of these insights no doubt contributed to a description of Khrushchev's later misgivings about his abolition of the MTS. It appears that loss of face may have been the one fear which kept Khrushchev from permitting a regeneration of the MTS in the early 1960's, when the Soviets were experiencing considerable difficulties with inefficiency in mechanized agriculture, and collective farms were disgruntled about having to purchase for cash former MTS machines that they had recently rented for grain.

Miller traces the MTS through evolutionary stages and in so doing demonstrates that such factors as ideology, situational demands, power struggles, and personal leadership style all influenced formulation and implementation of agricultural policy during the MTS period. Moreover, he points out that none of these variables ever operated to the exclusion of the others in the administration of the MTS. Struggles for authority, which characterize all forms of human organization, are documented at both high and low levels of government. Since many early collective farm chairmen were successful party workers from the industrial sector, they resented sharing leadership with the MTS officials. Some of the contests between collective farm and MTS leadership sound remarkably like conflicts between the production and sales personnel of modern American corporations.

Although technical and administrative expertise has always been given at least cursory recognition in Soviet industry, it was not, until the post-MTS period, given sustained credence in Soviet agriculture. The policies of earlier Soviet agriculture have now been replaced with higher prices for commodities and realistic plan targets. Likewise, political coercion and intimidation have been replaced with high premiums for above-plan sales to the State. The implications of these transactions are far reaching, for both the Soviet Union and the world in general. The maturation of Soviet agricultural decision-making as described in Miller's book leaves one with the notion that the USSR's recent agricultural gains are no less a result of cutting red tape than of turning furrows.

This book is not the place to learn the number of tractors in the Soviet Union over time. Rather, it describes the workings of a uniquely Soviet institution which placed an awesome number of machines on the land and helped to revolutionize what had been a backward peasant agriculture. The author has successfully concentrated on the administration of Soviet agriculture and has displayed it in dynamic form, thereby sparing the reader the frequently used exhaustive approach to administrative organizations. It is a work of value to the political scientist, economist, or anyone interested in Soviet affairs.

William H. Ragsdale

Cooperatives and Rural Poverty in the South

By Ray Marshall and Lamond Godwin. The Johns Hopkins Press, Baltimore, Md. 21218. 98 pages. 1971. $6.

This book raises challenging issues about the role of cooperatives in helping low-income (poverty level) rural people to help themselves. The authors show an understanding of the problems, and their treatment of basic issues is both sympathetic and objective.

Probably because of their familiarity with the Southern Federation of Cooperatives, the authors base many of their observations and conclusions on the experiences of the member cooperatives of this federation. This restricts the book's scope more than is indicated in the title. It is about black cooperatives and not primarily, as its title implies, about cooperatives and rural poverty. Actually, there are in total more poor whites than blacks in the South, and the problems and experiences of cooperatives composed primarily of low-income white members are not discussed to any significant extent in this book.

Chapter 1 presents the story of the plight of rural blacks in the South. Perhaps the most significant section in this chapter is a discussion of the future of the Negro in Southern agriculture.

Statements by Theodore W. Schultz and Calvin L. Beale are cited to show that blacks consider agriculture an inferior occupation because it is deeply rooted in the history of slavery and the failure of agricultural institutions to grant them social status, human dignity, civil rights, schooling, and economic opportunity. Schultz seems sure that blacks will abandon the countryside if given a choice. Beale in general agrees, but holds out at least a little hope for the blacks' survival in agriculture.

In chapter 2, the authors talk about conditions for successful development of cooperatives. In addition to the usual conditions, they stress the importance of social

cohesion. They point out that some cooperatives have catered to particular ethnic groups because the inclusion of different groups would prevent unity. While the authors do not specifically say so, they seem to imply this is an important reason for the establishment of many present-day cooperatives on an ethnic basis, particularly among the blacks.

This chapter also contains an enlightening discussion on the surge to "bigness" in farming and its effect on the role of cooperatives. The authors' treatment of the pros and cons is both logical and timely. Relying heavily on international experience as being germane, they conclude that large farms have advantages for some farming activities, but are not technically or economically superior for others. They further conclude that smaller farmers have efficiency advantages in producing labor-intensive crops and can obtain large-scale marketing and purchasing advantages through the formation of cooperatives.

The authors observe that a subsidy to enable these cooperatives to function may be an alternative to welfare payments and they say, "in order to be used as an instrument to help the rural poor, it could well be that the cooperative will have to be modified, at least as it has traditionally operated in the United States."

The nature of modification isn't spelled out, but subsidies and a heavy dosage of outside technical assistance and professional management are implied.

Chapter 3 contains a brief historical look at some of the major attempts to help low-income rural people, particularly blacks, through cooperatives. These efforts began in the 1880's and 1890's with the Farmers Alliance in Texas, a white organization. Affiliated with this was the Colored Farmers Alliance and Cooperative Union (CFACU). CFACU promoted poor people's cooperatives and, at its peak, claimed more than 1 million members.

By 1891, CFACU was out of existence. Its demise was attributed to racial discord, engaging in politics (on the losing side), and such business reasons as undercapitalization, overexpansion, and poor management.

In this chapter, the authors also touch on New Deal efforts to help low-income rural people through cooperatives, particularly the activities of the Farm Security Administration (FSA). From 1937 to June 1946, FSA was responsible for the formation of 25,543 poor people's cooperatives. Cooperative grants and loan funds were made available to lease land; to establish buying and marketing associations; to purchase farm machinery, breeding stock, veterinary services, and insurance; and to obtain water and other facilities.

The smaller and more informal associations had a rather high failure rate due to lack of patronage and management difficulties. The authors conclude, however, that the rate of failure was no greater than that of proprietary manufacturing enterprises during the same period. By the end of June 1946, 84 percent of the 25,543 cooperatives were still operating. Sixty-three percent had completely paid off loans obtained from FSA. Many cooperatives operating today were begun during this period with FSA funds.

The authors observe: "Opposition from the agricultural establishment (the USDA extension service, state extension services, state land grant agricultural colleges, county agents, southern congressmen, private farm machinery and supply companies, established cooperatives, and especially the American Farm Bureau Federation), which considered the New Deal antipoverty programs a threat to their economic and political power base, caused congressional opposition to the FSA, leading to a series of crippling restrictions beginning in 1943. In 1946 the FSA was replaced by the Farmers Home Administration (FHA)."

Chapter 4 is primarily a description and a brief for the Federation of Southern Cooperatives (FSC). FSC was organized in February 1967 and was composed principally of black cooperatives. It was established by representatives of 22 low-income cooperatives, most of which were affiliated with the Southern Cooperative Development Program. Since its formation, the membership of FSC has increased considerably; it had over 100 members in 1971.

Some of the more widely known cooperatives making up the membership of FSC are:

South West Alabama Farmers Cooperative Association (SWAFCA), Selma, Ala.

Grand Marie Vegetable Producers Cooperative, Inc., Sunset, La.

West Batesville Farmers Cooperative (WBFC), Panola County, Miss.

Mid-South Oil Consumers Cooperative (MSOCC), Whiteville, Tenn.

The Poor People's Corporation (PPC), Jackson, Miss.

Freedom Quilting Bee (FQB), Gee's Bend, Ala.

Acadian Delight Bakery, Lake Charles, La.

South East Alabama Self-Help Association (SEASHA), Tuskegee, Ala.

In the final chapter, the authors get back to the very difficult question of whether cooperatives can help low-income people, black or white. On this the authors seem undecided. For example, at one point in the book the idea that blacks will desert agriculture for the cities is given considerable support. If this were to happen, cooperatives would not be able to make any significant contribution to blacks in the rural areas because there would be few left to use the cooperatives.

In the concluding paragraph of chapter 2, a statement is made that: "In general the American cooperative movement has had very little to offer the poor farmer with inadequate incomes and assets." The authors, after considerable wavering on cooperatives as tools to development, conclude they can help:

If cooperatives can become productive and efficient enough to compete with other types of business firms.

If cooperatives can acquire the necessary financial resources.

If cooperative members can adapt to modern technology.

If cooperatives can acquire efficient management and advanced technology.

The authors leave us with the statement that "cooperatives hope to become developmental but it is too early to say with much confidence that they will."

Job K. Savage

Change in Rural Appalachia

Edited by John D. Photiadis and Harry K. Schwarzweller. University of Pennsylvania Press, Philadelphia, Pa. 19104. 265 pages. 1970. $15.

People in Appalachia and the Cooperative Extension Service each have problems adjusting to change. This book dwells on building a better world for both. In a collection of conference papers and journal articles, the editors plus four other sociologists, two educators, and a psychologist, all associated through the Appalachian Center of West Virginia University, tackle the knotty problems of the Southern Appalachians and how Extension might adapt to meet them.

Emphasis on "the individual's adjustment to the new society" is the unifying objective proposed for Extension. The relation of change to the "individual's internal world and his long-term happiness" should be the key concern. Such guideposts suggest the need for a radically revamped Extension Service that has jumped clean over the farm fence. Agriculture may remain a specialty of the organization, but implicit at least in Photiadis' vision is a universitywide service tapping many disciplines and remolding its personnel accordingly.

A sample problem which should concern Extension in the Southern Appalachians—and by inference in other underdeveloped regions and countries—might be how to smooth the path of rural migrants to urban areas. Another is how to reduce the alienation and resignation the poor feel because of the gap between their expectations from life in the larger society and their actual accomplishments. In another example it is suggested that Extension might through appropriate testing predict potential high school dropouts. Having determined who these might be, Extension would then have to organize them in groups and somehow reduce their potential to drop out. This example illustrates the new disciplines Extension would need to tap, as well as the possible competition or duplication in service it might create—in this instance, with the education establishment.

Photiadis defends such new ventures on the grounds that where there is a vacuum, "Extension has the first right to walk in." One can agree that a vacuum should be filled and that Extension has as much right to do so as any public or private group, providing it can effectively deliver the goods. Therein, of course, lies the challenge, since many of the services envisioned to be needed by "individuals adjusting to society" are not in the traditional Extension warehouse of expertise. However, the vision is imaginative and quite possibly essential to the survival of the Cooperative Extension Service. A number of States already have moved out in new nonagricultural directions.

A substantial portion of the book sets the stage for the above new game plan for Extension. A number of excellent chapters cite the impacts of change in the greater society on individuals and social institutions in rural Appalachia. The family, church, local government, education, folk subcultures, and the economy are all treated separately. Some chapters read well, while others struck this economist reviewer as having been composed too much in the verbal thickets of academia.

For the diligent reader, the book presents a wide background on the adjustment pains of rural Appalachia. Robert W. Miller does a good job of assessing retraining and related manpower programs. Nathan L. Gerrard presents a lucid picture of the church in the mountains. Two interesting case studies of power structure conflicts in local communities due to forces of change are provided by Richard A. Ball.

Due to its subject, an essentially tragic undertone pervades the book which lends urgency to the suggested new role for the Cooperative Extension Service. Janice Holt Giles is quoted in part as follows: "Whether these changes will create a happier, more truly abundant life for Appalachia remains to be seen. For a long time they had something very beautiful and something intrinsically very valuable. They were a beautiful people." While this quote might be discounted for overlooking many aspects of life, it does reflect the damage done to the life-style of the people by the loss of their economic underpinning. A major question in our ecology-minded society is how to preserve variety not only in the natural bu

also in the cultural environment. The book says folk subcultures are victims of progress. The message is that extension should do much more to lighten the burdens of mass change.

Theodore E. Fuller

Suburban Land Conversion in the United States: An Economic and Governmental Process

By Marion Clawson. Published for Resources for the Future, Inc., by The Johns Hopkins Press, Baltimore, Md. 21218. 406 pages. 1971. $12.50.

The time has long passed when the subject of land use could be considered purely academic. Fortunately, this book, while meeting scholarly standards for analytical capability and coverage of the subject, is also extremely readable. It should appeal to a broad spectrum of knowledgeable readers who are concerned with today's problems of city, suburbs, and open space. Few readers, perhaps, will be willing to read the book from beginning to end. For this reason, the somewhat unusual repetition of data and ideas in various sections of the book is less objectionable. The repetition is largely unavoidable, given the complexity of the subject and the lack of any generally accepted conceptual and data framework. The book consists of passing a broad collection of relevant data, public knowledge, private observation, research findings, generalities, and suggestions over a series of conceptual screens to classify the various components of a system and winnow out any whole grain that may be there. It is a credit to the author that he was able to develop so much substance out of such a nebulous data base.

Part I, consisting of eight chapters, gives some historic background and introduces the data problems that are dealt with more fully in part II. It describes the participants in the decisionmaking process and their activities as home buyers, builders, planners, developers, governmental units, and others. It brings out the generally independent actions of these participants in what might seem to be a fruitful area for closer cooperation.

Gaps in the data base used in measuring actual land use and changes in land use led to a study of the adequacy of present definitions and data sources which, by itself, would warrant a substantial volume. The five chapters of part II examine the Northeastern Urban Complex of the United States and provide more detail for some of the generalities presented in part I. Two of these chapters give highlights of case studies made by Resources for the Future of three standard metropolitan statistical areas (SMSA's)—Washington, D.C., Wilmington, Del., and Springfield, Mass. A more rapid coverage was given New York, Boston, Philadelphia, and Baltimore. As Clawson makes clear, data from the population and agricultural censuses fall far short of meeting analytical needs. In 1961, for instance, about 21 percent of the land in the Boston-to-Washington Northeastern Urban Complex was in urban and public uses, 35 percent was in farms, and 44 percent was unaccounted for. Much of the idle land and even some farmland fell within largely urban counties. It is just this unutilized land that is the subject of this book. This data gap points to the need for a land use census with a broader base than the current agricultural census.

While much of the author's analysis relates to land use, it is clear throughout the book that Clawson is primarily concerned with the process of conversion of land to urban uses and its effect on people. He points out that decisionmaking is badly fractionated, due to overlapping political and quasi-political taxing and zoning units that generally weaken or emasculate long-run regional planning processes. He indicates that the profit motive in the present institutional framework is only partially successful in promoting land use conversion at a cost and in a sequence that is most productive of the public good. He gives a number of illustrations of public decisions, such as the tax benefits from depreciation allowances and capital gains, that appear to favor speculation rather than development, and the creation of private investment values rather than the public good. Zoning exceptions provide windfall gains to developers who capitalize on public investments in roads, sewers, and water systems. The final purchaser may even pay twice for the public services that provide much of the site value of developable land—once in the inflated value of the land and a second time through taxes on the higher land values.

By careful choice of statistical data, Clawson brings out the comparatively low density of population in many areas that are classed as urban for census purposes. He continually emphasizes the need to examine urban concentration at a less-than-county level. The census count of people according to governmental jurisdictions is inadequate for land use analysis. A census based on relationships of land and people is needed. Clawson's analysis shows up the quick analyst who relies on easily obtained statistics that are ill defined and not comparable over time or space. It is evident to moderately knowledgeable observers that the Northeast Urban Complex, the so-called megalopolis of the North Atlantic Seaboard, is anything but one vast urban conglomera-

tion. Clawson points out that it is not closely integrated socially or economically, and that the interspersed unused land makes it highly unlikely that the megalopolis of the popular writers will occur in this century.

Part III, in about 60 pages, summarizes some of the findings of part II, projects some trends into the future, and examines possible modifications of the urbanization process. While Clawson is far from complacent about the present or foreseeable future regarding suburban land use, he does not regard radical change as either imperative or imminent. He does feel, however, that greater economic efficiency and greater equity could result from certain significant changes in the process. He hints at alternate institutional structures for promoting long-term efficiencies and flexibilities in land use adjustments. Sometimes he provides more than hints, as when he proposes selling rezoning by competitive bidding.

This book is valuable, not so much for new ideas presented or even for a new approach, but rather for its comprehensiveness and readability. Those familiar with the field of land use planning will recognize that once-radical points of view are now stated in matter-of-fact ways, and are related to each other in a more-or-less integrated system.

Our social and economic values are tied much more firmly than we commonly recognize to land-people concentrations. It may be an indictment of our system that something as important to the social and economic structure and the development of our communities has been left so much to chance, without a rational attempt to understand what was happening. Clawson's work has done much to bring order out of chaos and to point out areas where we can improve both our knowledge and our expectations. This book, which appears long and broadly inclusive, is still notable for that which was omitted—a bibliography. Although the author acknowledges a long list of experts in the field and footnotes additional sources, a bibliography, however incomplete, would have been of considerable value.

Howard A. Osborn

Dimensions of Change

By Don Fabun. The Macmillan Company, 60 Fifth Avenue, New York, N.Y. 10011. 230 pages. 1971. $8.50.

Since the dimensions of global communities are changing at a rapid rate, there is widespread speculation on what the world will be like by the end of the century. To be sure, no one can know what will happen in the future, but men can rationally forecast potential developments. In this regard, one can find much of interest in this book.

The author speculates on the changes that technology might bring about in the next 30 years. The book is attractive, illustrated in glossy color. It covers a wide spectrum of areas such as ecology, shelter, energy, food, mobility, and telecommunications.

A dismal assessment is made of the future prospects for ecology, if the deleterious influences on our environment are permitted to continue as they have been in the past. The great historical phenomenon—the Industrial Revolution—which has given the world enormous material wealth, has also given the world pollution. Pollution is disruptive to the environment because its ingredients cannot be incorporated and reused within the system. To avert a crisis, the author suggests the appointment of a Secretary of Ecology at the cabinet level.

Housing needs in the next 30 years will be drastically unfulfilled unless radical innovations in housing structures are accomplished. Shelter must be understood to be part of a dynamic system and not a static phenomenon. Accordingly, the author's position is at variance with the thinking of contemporary urban planners. He contends that cities cannot be "planned" but must develop naturally.

One can look ahead with optimism to an improved society with the use of still untapped sources of energy. Solar energy can supply in 2 days enough energy to outlast all remaining fossil fuel reserves. Nuclear energy can supply as much as half of all U.S. electrical power by the end of the century. Even wind and tidal power can be harnessed effectively to produce electricity without pollution. By the year 2000, power will be used at a rate of five times that being consumed today.

The development of food technology is fascinating reading. In addition to the feasibility of perfecting oilseed and synthetic proteins as reserves against possible food shortages, the author describes novel ideas on raising animals and fish. Game ranches could be set up to raise animals in their native surroundings for cultivation as food, as well as sea ranches which would use killer whales to corral and herd other whales that could be used as food and oil.

As mobility becomes an even more common phenomenon in the American society, alternative modes of transportation must be perfected to substitute for the polluting gas engine automobile. The steam and electric cars will doubtless make their appearance soon, as well as a rapid transit using magnetic trains. The author, however, feels that much of the travel that now takes place will be unnecessary.

Innovations in the field of telecommunication appear to be somewhat mysterious. The areas of extrasensory perception, learning more about the thinking of animals on spaceships, and body language are, it seems to this reviewer, still in the realm of science-fiction. On the other hand, electronic devices such as kinesthetic cinema, cartridge television, and liquid crystals are just around the corner.

If the prophecies prove correct, one could expect to see great change within the lifetime of most of us.

Jack Ben-Rubin

Thomas Jefferson and American Democracy

Edited by Henry C. Dethloff. D. C. Heath and Company, 125 Spring Street, Lexington, Mass. 02173. 209 pages. 1971. $2.50 (paperback).

Thomas Jefferson, third President of the United States, is often credited with developing the agrarian creed. Some of the selections in this collection give his views on the virtues of agriculture and agrarian democracy.

The Stages of Economic Growth

By W. W. Rostow. Cambridge University Press, 32 East 57th Street, New York, N.Y. 10022. 253 pages. Second edition. 1971. $4.95.

When first published in 1960, this volume had a strong influence on development economics, even though many economists disagreed with Rostow's analysis. The widely read ERS report, *Agriculture and Economic Growth*, written by James P. Cavin and others, owed much to Rostow. This "second edition" is essentially a reprint of the first edition, with an added preface and appendix replying to some of the criticisms of the work.

Plantation in Yankeeland

By Carl R. Woodward. The Pequot Press, Chester, Conn. 06412. 198 pages. 1971. $10.

The author, past president of the University of Rhode Island and an authority on the agricultural history of that State, traces a large plantation from its establishment in 1637 to the present. This plantation, like others in the Narragansett region, was operated by slave labor until the early 1800's. Incidentally, this history makes clear that large-scale agricultural operations are not necessarily successful.

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