

C. Gregory Knight, Ecology and Change: Rural Modernization in an African Community. New York: Academic Press, 1974.

FRANCIS G. SNYDER

This book is a study by a geographer of agricultural change among the Nyiha in Mbozi, Tanzania. It provides a great deal of information concerning Nyiha agriculture and changes in its organization, the economy, and rural life generally. This review is primarily concerned with (a) the models of change employed in the study and (b) the book's contribution to our understanding of the role of law in social and economic change.

The purpose of the book is clearly set out in the preface. The author proposes the book as a "contribution intended to explain the traditional agricultural system of a particular society and the process and results of agricultural change within it" (p. xii). In the author's view, the example he examines is particularly important since "change has resulted from a voluntary learning experience that may suggest strategies for development where funds for personnel and domestic programs are not available" (p. xiii). On the basis of geographical field research in Mbozi Area during 11 months in 1966-67, the author argues that the model of agricultural change formulated by Ester Boserup (1965) "provides a reasonable working set of assumptions from which to build a model of agricultural change" (p. xv). He proposes to "outline an approach toward understanding change from a holistic viewpoint" (p. xvii), taking into account the following aspects: "the basic ecology of agronomic systems set in a regional ecological systems [sic]; the ethnogeography or folk geography of the people involved;

the spatial organization of society and landscape developing through time; the political, social and economic matrices in which the evolution of the Mbozi economy, society and landscape is imbedded" (p. xvii). Overall the study is a useful one, but for one interested in the socio-legal aspects of rural underdevelopment it is disappointing in several important respects.

I begin, first, with the author's definition of modernization and development. This definition is set forward at numerous points in the book (e.g., pp. xv-xvii, 208, 210, 226, 231, 256). Knight envisages modernization as a multi-dimensional transformation of traditional societies, a point of view originally elaborated by Lerner (1958), Inkles and others (see p. xv). Underlying these aspects is "a fundamental evolution of personal and aggregate commitment to a radically different scale of life from that one extant. This scale is primarily the typing of the individual, family, and local society into the regional and national mosaic of institutions, activities, and belief" (xv). Although this might provide a useful point of departure, some of the weaknesses in the author's treatment of social and economic change become more apparent in his treatment of economic models of change later in the book.

For example, he lists factors drawn from Soja (1968:4) which contribute to development, describing many of them as "particular manifestations of the general concept of increased accessibility" (p. 208). Later he sets forth a number of variables used as indices of modernization, including bicycles, radios, ploughs, coffee and other cash crops, labour migrants, stores, grain mills, bars and restaurants, butcheries, African-owned motor vehicles, and "European estates included in their role as a major source of employment" (pp. 226 ff.). Using a factor-analytical approach, he groups these variables into a set of three factors: (a) the coffee-rural modernization complex; (b) alternative income sources; and (c) commercialization (p. 231). Subsequently, he states that "modernization is synonymous with increasing commitment to and dependence upon an economic system far larger in scale than traditional society" (p. 256).

While recognizing that this process makes the Nyiha fundamentally dependent on larger social and economic forces, he fails to come to grips with some of the consequences of this dependence. These consequences include rural economic differentiation, the dislocation of rural communities due to labour migration, and certain fundamental contradictions between increasing dependence and social change conceptualized as voluntary and a matter of choice. For example, in a discussion of the role of the Asian trader, the author mentions that for the typical Nyiha family a bicycle represents more than a year's cash income, and that the average income from cash cropping would be at most only about 18 dollars per year (pp. 190-91). In the context of other information, this point suggests the existence of substantial income differentials in the countryside, but the author does not pursue this point.¹

My second interest here concerns the role of law. Knight

mentions two aspects of law in his monograph. The first comprises aspects of Nyiha law, including marriage, inheritance and land tenure (see, e.g., pp. 37, 57-59). He devotes considerable attention to changes in land tenure, noting the consequences of a virtual enclosure of rural land, the development of a market in land, and the breakdown of traditional processes for settling land tenure disputes (pp. 240-54). He points out that there is "little legal basis for recognition of either changes from the traditional land tenure practices or sale of improvements to land, as well as land itself" (p. 241). Furthermore, he shows that the development of rural land tenure is in many respects contrary to Tanzanian government policy and makes suggestions for changes in rural land tenure to bring it in line with national land policy. He also mentions that, despite economic and other changes, rural modernization has had relatively little effect on Nyiha cognition in its aspect of ethnogeography. He fails, however, to bring these aspects of change together in a very satisfactory way. This shortcoming is related to the parallel models of social change which he employs and the way in which these models are ultimately integrated, to which I return below.

The second aspect of law which appears in this monograph is national law, either during the colonial period or since independence (see, e.g., pp. 41-42, 49, 58, 111, 146, 153, 155, 176, 177, 179, 181, 192-95, 240, 241-50, 253). For the most part these are scattered examples of colonial legislation and its effects on Nyiha political organization, agriculture and other aspects of rural life. Knight does devote considerable attention to the effects of colonial land legislation and namely to the fact that "no single bloc of land was set aside for exclusive European use" (p. 181). This dispersal had the very important consequence, the author argues, of facilitating day-to-day interaction of European estate and African small-holding through cash labour. The author characterizes this relationship as comprising "a viable ecology of voluntary change in cash-crop technology" (p. 183). In my view, however, it is seriously misleading to characterize this process of change as a product of voluntary choice; the author himself states that the European planter was dependent upon large inputs of cheap labour to operate a profitable estate (see p. 182). This shortcoming may be partially ascribed to his model of change, which treats the trader and planter as a model for emulation without regard to their differential economic status and the economic and political context of colonial domination. Moreover, while showing that tax policies during the colonial period forced rural dwellers into the labour market or the production of cash crops, he does not dwell sufficiently upon the relationship between political and economic interests during that period. This is due to his primary orientation which gives most weight to geographical, spatial variables and to the models of social change which he employs.

The author clearly recognizes that one of the major consequences of modernization has been an increased vulnerability and dependence of rural peasants upon wider economic processes. He is also to be congratulated for his emphasis upon indigenous sources

of change. He argues, for example, "that the European Intervention in Mbozi, with accelerated population growth and cash crops did not alter the ultimate course of traditional agricultural change but simply hastened it" (p. 171). Moreover he shows that alien sources such as colonial rule, missionaries, planters, traders, and government brought other aspects of change in addition to intensification of agriculture.

In order to analyze rural modernization he identifies a series of elementary components: "the people; their models of the environment; traditional and evolved agricultural systems operating within a man-modified landscape; population and economic growth; and sources of change" (p. 197). To bring these components together he employs a series of models of change. These models are, respectively, a cultural model (derived primarily from Boserup: "population growth is an independent variable determining agricultural development" (p. 199)), a resource model, from which he suggests that aspects of the environment result in a scaling of the distribution of intensified agriculture; an economic model, which emphasizes accessibility of rural areas and their increasing dependence upon the market resulting either in a cash-farming economy or an industrial economy with migrant labour (see p. 210); and a spatial model which enables him to show the diffusion of innovations through space and time. The overall pattern of change in Mbozi is summarized as follows:

The synchronous pattern of change in Mbozi evinces several emergent characteristics. First, agricultural intensification as a result of population pressure on resources, allocation of land to cash crops, and decreased fluidity of land resources due to more tenacious land tenure is reflected in the transition to a grassland fallow agricultural system, with the increasing importance of the plough as an agricultural implement. Second, prime among alternative sources of income to meet both increasing economic needs and desires is cash cropping, reflected in patterns of land use, the evolution of land tenure, and in commodities and services that income has made available . . . Finally, this dual patterns of agricultural intensification and economic modernization has a spatial dimension, written by the broad paintbrush of resource characteristics and temporal development of change from critical foci and accelerated along routes of accessibility. (pp. 224-225)

In order to aggregate his data on rural modernization he employs a wide set of variables (see pp. 226-27) which are simplified by means of factor analysis into three factors (already mentioned; see p. 231). This operation enables him to propose a "basic modernization pattern" which he identifies as being related to the development following coffee cultivation (p. 232). He concludes that the "role of accessibility in determining this pattern is clear. All of these 'least modern' villages are totally isolated" (pp. 232-33).

In at least one sense this discussion of rural modernization is disappointing, since the conclusions reached by the author are fairly obvious. In using a model of rural modernization derived primarily from geography in order to explain social and economic change, Knight pays less attention than might otherwise be merited to the role of political and economic factors. This is perhaps a curious statement to make about a book on rural geography and agriculture. But despite his emphasis on wage labour as a source of innovation, the author does not attempt otherwise to relate changes in the organization of labour to other aspects of social change. Modernization is therefore characterized primarily as a matter of "commitment" (p. xv), and the specific characteristics and consequences of colonial capitalism are given relatively short shrift. Consequently, despite a great deal of valuable descriptive information, the model of social and economic change employed in this study remains in the last analysis an unsatisfactory and relatively superficial one. This is unfortunate, since the monograph amply demonstrates that the author acquired sufficient data to go beyond the models of social change which he employed and to consider the interrelationships between aspects of change in a more profound manner than permitted by the correlation of various statistical indices. In sum, the monograph provides a useful description of the geographical aspects of agricultural change with special emphasis upon its spatial aspects. It does not add substantially to our conceptualization of change, nor does it contribute very much to our understanding of the way in which law, either rural or national, is related to "modernization" or underdevelopment.

NOTES

1. An indication of his views on income distribution, see the following: "(even prior to 1961) considerable inequity in income among the Nyiha had already begun to emerge. As outside observers we would note, of course, that initial differences in local income are an expected consequence of modernization under a diffusion process, if not a result of differentials in resource endowment." (p. 251).

REFERENCES

- BOSERUP, Ester (1965), The Conditions of Agricultural Growth. Chicago: Aldine.
- LERNER, David (1958), The Passing of Traditional Society. New York: Free Press.
- SOJA, Edward W. (1968), The Geography of Modernization in Kenya. Syracuse: Syracuse University Press.