## **Book Reviews**

Social Change in Tikopia. Re-study of a Polynesian community after a generation. Raymond Firth. Macmillan, New York, 1960. 360 pp. Illus.

The tiny Pacific island of Tikopia is already well known to anthropologists, thanks to Raymond Firth, who studied this isolated Polynesian community in 1929 and whose books, We, the Tikopia (1936), A Primitive Polynesian Economy (1939), and Work of the Gods in Tikopia (1940), are models of the highest standards in ethnographic reporting. Social Change in Tikopia represents a restudy of the island undertaken in 1952 with the assistance of James Spillius. It is a record of social change in Tikopia and, at the same time, of Firth's own growth as one of the leading anthropologists of our time. His account of political organization and social control, for example, is as sophisticated for the present as was his account of economic organization for two decades ago.

The book is more than a study of social change in other respects, also. Just before Firth's arrival in 1952 a serious hurricane had swept the island and destroyed most of its food resources. Firth provides an unusual account of the society's response to sudden crisis and of its operation during a famine. Rarely do anthropologists have such an opportunity to study isolated and economically self-sufficient communities trying to cope with disaster, largely through their own efforts and cultural resources; it is especially rare when such a study can be made of a community whose operation under normal circumstances has already been recorded.

Firth reviews in detail changes in economic outlook which have resulted from increased outside contact and population growth. Of interest is his analysis of how money has come to fit into the native economy. From economic change, he proceeds to a discussion of

changes in land rights and calls attention to the greater individualization of holdings; this is not a result of Western influence, as might be supposed, but a response to internal pressures on subsistence resulting from the abandonment of traditional practices of population control. Analyses of patterns of residence and marriage, the system of lineages and clans, the political structure, and the system of social control are also presented in detail with an assessment of the amount and nature of change in each. Religious changes are not included in this volume.

Two things characteristic of Firth's work give this study special value. One is his sense of history and his view of ethnography as a form of historiography, which leads him to present detailed accounts of events as he observed them. The reader is brought directly to the scene and given ample opportunity to see Tikopia in action. The other feature of note is Firth's excellent use of his concept, developed between the two visits to Tikopia, of social organization as distinct from social structure. He concludes that Tikopian social structure has changed little, but that there have been a number of organizational changes within the structural framework which, if they persist, must soon lead to structural changes as well. Whatever the limitations of this conceptual distinction may be, it helps Firth avoid the trap into which some students of change have fallen. Firth does not confuse behavioral change with cultural change, nor does he interpret different applications of a people's principles of social action to changing conditions as if the different applications represented changes in the principles themselves.

The final conclusion deserves quotation: "What the example of Tikopia shows is that even in a very small-scale society such as this, processes of social change are complex. There is no simple determinism. The changing

forces of the environment and forces of production, including the changing structure of the technological system, have clearly been of great importance. But so also have been the forces involved in the system of social allocation. All of these have operated, together with conceptual and decisional elements of individual and group behavior, in a field where alternatives for choice have always been possible. The existence of such alternatives, including those between material and symbolic satisfactions, renders it impossible for any social analysis to predict more than in a very tentative way the future history of a society" (pages 353-54).

Because he has attended to detail and has been faithful to his role as historian as well as analyst, Firth has written a book which thoroughly documents this conclusion.

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Artificial Earth Satellites. vols. 1 and 2. L. V. Kurnosova, Ed. Translated from the Russian. Plenum Press, New York; Chapman and Hall, London, 1960. 107 pp. \$9.50.

The Soviet Academy of Sciences is to be commended for publishing a series of volumes which will carry all of the Russian papers dealing with problems of satellites and space research. Three volumes have already appeared; the first two have been translated by the Plenum Press and are published in the present book. The articles cover a broad range of scientific subjects and contain experimental results and theories, in many cases preliminary, from the first three sputniks. Since the third volume contains the results obtained from lunik, the title Artificial Earth Satellites is somewhat misleading. The editor of the series, L. V. Kurnosova, is an important contributor to the Soviet scientific effort in space investigations; her specialty is in the field of cosmic rays. The translation is excellent as far as I can judge, and the graphs are quite excellent.

The series of papers opens with a contribution by S. N. Vernov and his colleagues on the measurements of cosmic rays made by Sputnik II. I found figure 1 of particular historical interest. It is titled "The altitude dependence of the cosmic ray intensity," but it shows very clearly a rise in intensity starting