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

at about 400 km and increasing by about 50 percent at the highest point, 700 km. As is now well known, the increase is produced not by cosmic rays but by particles of lower energy trapped in the earth's magnetic field. However, the Russians were limited to data obtained by telemetering over the Asian continent and did not receive results from the apogee of the satellite. In contrast, data sent back by our Explorer I satellite were obtained at an altitude high enough to make the increase quite clear-cut, and thus the presence of something different from the normal cosmic radiation was definitely indicated. In volume 2, based on results obtained with Sputnik III, both Krassovsky and Vernov show that they are aware of trapped radiation.

Other papers deal with the determination of upper atmosphere densities, satellite orbits, radio and optical observations of satellites, and the interaction of satellites with the ionosphere. Of particular interest are the ionospheric studies, reported by Krassovsky, indicating the very high electron densities in the upper region of the ionosphere which had not been previously accessible to direct measurements. The Soviet measurements on the electric charge of satellites are still unique and have not been repeated elsewhere.

After this successful beginning, one may look forward with anticipation to the translation of further volumes as they appear.

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Lewis Henry Morgan, American Scholar. Carl Resek. University of Chicago Press, Chicago, Ill., 1960. xi + 184 pp. Illus. $4.50.

This is a timely biography. Evolutionism in anthropology is being rehabilitated, and with this major reversal in perspective, it becomes necessary to rewrite the intellectual history of the discipline. In earlier decades of this century Morgan, along with the other 19th-century evolutionist pioneers, was first stoned outright by Western scholars and then buried under an avalanche of indifference. But now his books are being reissued, his journals are being edited, and publishers apparently find that he "sells." Resek makes the point that the waxing and waning of Morgan's influence may well reflect turns in American thought and life. Compared with Bernhard Stern's 1931 biography (*Lewis Henry Morgan, Social Evolutionist*), Resek's more sympathetic treatment is good documentation for this point.

Morgan, in the words of a contemporary, charted "a new continent of scholarship." In *The League of the Iroquois* (1851) he produced anthropology's first work in scientific ethnography. He entered comparative ethnology through a systematic study of kinship in the belief that he could demonstrate thereby the Asiatic origin of the American Indian. He emerged from this study, in his famous *Ancient Society* (1877), with a grand theory of the evolution of culture based on the evolution of technology, a theory that linked the development of the state to the development of private property. As a man and a scholar—as Resek says and then richly describes in fine style—Morgan cannot be easily categorized. Besides being an anthropologist, he was a lawyer, a politician, an entrepreneur, president of the American Association for the Advancement of Science, defender of the Indian, a true believer in the American Republic, and the author of a definitive treatise on the American beaver. It was left to history to display, in a huge paradox, Morgan's kaleidoscopic variety: after Marx and Engels discovered his writing, this upstate New York, Republican bourgeois was posthumously elevated to the status of a socialist prophet.

Yet Resek does not in any way convey the view that Morgan was an inconsistent, erratic thinker. One of the values of this book is that it is an antidote to Stern's volume. In Stern's hands, Morgan, caught in a crossfire of Marxism and Boasian antievolutionism, suffers the worst of both worlds and emerges as a virtual class enemy, as well as a "not erudite," unoriginal thinker with a few good ideas and more bad ones. Resek, an intellectual historian, does not consider Morgan's anthropological ideas as fully as Stern did, although Resek's discussion of classificatory kinship terminology, which Stern misunderstood, indicates that this might have been profitable. But Resek, in telling how Morgan's ideas developed, is much more convincing than Stern. And, in describing Morgan's development, he corrects Stern's assertions about Morgan's religious fundamentalism, the relation of Morgan's ideas to Darwinism, his attitude toward democracy, property, and American expansion, his originality as an intellect, and a number of other matters, large and small, ranging down to the adequacy of his library. Resek considers it the task of the intellectual historian to "uncover the assumptions that men live by in another time and place and that they modify or exchange for others as experience demands . . ." I think he has done this well for Morgan. He seems to give truth to a prophecy written by Francis Parkman in a letter to Morgan: "The more advanced we become in intellectual progress, the more your labors will be appreciated."

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Advances in Organic Chemistry. Methods and Results. vol. 1. Ralph A. Raphael, Edward C. Taylor, and Hans Wynberg, Eds. Interscience, New York, 1960. x + 387 pp. Illus. $12.

This volume contains six chapters: (i) "The Kolbe electrolytic synthesis," B. C. L. Weedon (34 pages); (ii) "Polyphosphoric acid as a reagent in organic chemistry," F. Uhlig and H. R. Snyder (47 pages); (iii) "The Wittig reaction," S. Trippett (20 pages); (iv) "Hydroxylation methods," F. D. Gunstone (45 pages); (v) "The selective degradation of proteins," E. O. P. Thompson (90 pages); and (vi) "Optical rotatory dispersion and the study of organic structures," W. Klyne (110 pages). An author index (26 pages) and a general subject index (13 pages) are provided. Each chapter is well written, by an authority on the subject, and each is an adequate, up-to-date account of the practical aspects of the topic, together with relevant theory, helpful experimental details, and results obtained. The book is well bound, beautifully printed and illustrated, and (considering the wealth of information it contains) woefully underpriced.

Despite these merits, some doubt might be entertained concerning any real need for this volume (and, by extension, the projected series), since four of the topics covered have been the subjects of excellent theoretical reviews within the past two years [Chapter 2, *Chemical Reviews* **58**, 321 (1958); 3, *Angewandte Chemie* **71**, 260 (1959); 5, *Progress in Organic Chemistry*, vol.