

Pacific at this very early time. That tiny Easter Island, surrounded by the vastness of the empty ocean, was reached by a Polynesian craft from the west is remarkable. If it seems unlikely that one craft would reach Easter Island, it seems more unlikely that the island would be reached twice, and the same holds for a drifting Peruvian raft.

Archeological evidence revealed by the Norwegian Expedition of the sudden appearance, toward the end of the Early Period, of great *ahu* platforms of remarkably fitted, Andean-like masonry, followed by a period of intensive activity in making and erecting huge stone images upon the *ahu*, indicates the introduction of a powerful influence that could well have been exerted by a strong chief from the Andean area of Peru. Although the archeologists of the expedition point out some traits that might possibly be of South American origin, they cautiously nowhere claim in their summaries that they have discovered a substratum of Andean culture underlying and preceding the Polynesian.

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## Interpretative Essays

**This is Life.** Essays in modern biology. Willis H. Johnson and William C. Steere, Eds. Holt, Rinehart, and Winston, New York, 1962. xii + 354 pp. Illus. Paper, \$3.95.

**Frontiers of Modern Biology.** Twenty lectures originally broadcast over the Voice of America. Coordinated by Gairdner B. Moment. Houghton Mifflin, Boston, 1962. xv + 192 pp. Paper, \$1.95.

How to interpret science to the educated layman is impressively demonstrated, at least for biological science, in these recent paperbacks. Each volume consists of a collection of essays on particular aspects of modern biology. Each essay is written by a scientist active in the subject field. *This is Life* is intended for the beginning student of college biology, and the essays are more detailed and demanding than those in *Frontiers of Modern Biology*, which were originally delivered as lectures in the Forum Series on the Biological Sciences, prepared by the Voice

of America in cooperation with the American Institute of Biological Sciences. Each collection, however, is admirably adapted to its audience, and each presents the spirit and challenge of biology forcefully. One paramount characteristic of the two volumes is the fascinating insight into the scientific method which each author so skillfully provides. Biology comes alive between the covers of these two volumes.

It is interesting, but not of great importance, that the essays in both volumes are arranged according to the general concept of levels of organization, but the books begin at opposite ends of the biological spectrum; they agree only in placing the origin of life in the last chapter. The 12 essays included in *This is Life* are: "Photosynthesis" by C. S. French, "Energy release and utilization" by A. C. Giese, "Ultrastructure of cells in relation to function" by R. V. Dippell, "Nutrition of protists" by S. H. Hutner, "Viruses: Reproduction and heredity" by A. Siegel, "Bacteria: Reproduction and heredity" by H. R. Garner, "Structure of the genetic material and concept of the gene" by G. W. Beadle, "Plant growth and plant hormones" by F. W. Went, "Plant morphogenesis" by I. M. Sussex, "Animal morphogenesis" by M. V. Edds, Jr., "The role of hybridization in evolution" by E. Anderson, "The origin of life" by S. L. Miller. The volume is well illustrated and has a 10-page index. At the end of each chapter there is a carefully selected bibliography. Perhaps in its treatment of modern biology, the volume is overbalanced toward molecular and cellular considerations to the extent that new and exciting advances in other areas are omitted.

In *Frontiers of Modern Biology*, the 20 essays are: "Biological science today" by G. B. Moment, "Historical studies" by J. M. Oppenheimer, "Animal populations" by E. S. Deevey, "The timing of spring migration and reproduction in birds" by A. Wolfson, "Newer paths in taxonomy" by J. O. Corliss, "Instinctive behavior" by W. G. Van der Kloot, "The development of visual behavior" by L. S. Stone, "Biological clocks" by V. G. Bruce, "Plant photoperiods" by H. A. Borthwick, "The biochemistry of human heredity" by H. B. Glass, "Tissue transplantation" by J. B. Ebert, "Chemical control of cell growth and cell division: An aspect of growth and morphogenesis" by F. C. Steward, "Human chromosomes and tissue culture"

by T. T. Puck, "Modern aspects of cell division" by W. R. Duryee, "Fertilization" by C. B. Metz, "Regulation of enzyme-catalyzed reactions" by DeWitt Stetten, Jr., "Photosynthesis as an energy conversion process" by D. I. Arnon, "Nucleic acids and the physical basis of inheritance" by A. Rich, "Energy and life" by W. D. McElroy, "Theories of the origin of life" by G. Wald. Regrettably, the lectures are published without illustrations, bibliographies, or an index. Nevertheless, once begun, this book is hard to put down. I hope we will see more books like this one.

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## Economic Anthropology

**Economic Development and Social Change in South India.** T. S. Epstein. University of Manchester Press, Manchester, England; Humanities Press, New York, 1962. 369 pp. \$8.50.

More than two-thirds of the world's population is in underdeveloped countries, and in these countries most people live in rural villages where the technology, the economy, and the social and political relationships partake more of traditional than of modern culture forms. But the winds of change are blowing on these villages. With no significant exceptions that I can think of, the less-developed nations are now seeking to move toward technological and economic modernization. They are being aided by the United States, the U.S.S.R., other nations in both camps, and by the United Nations and its specialized agencies, such as the Food and Agriculture Organization and the World Bank. All over the world, development programs are bringing to the villages such powerful instruments of change as roads, irrigation, fertilizers, agricultural extension agents, and schools; to nearby towns they often also bring factories, movie houses, hospitals, and specialized training centers. What will be the nature of the effects on traditional village societies? This is a question of major significance in today's world, and one on which social science research should be able to throw light. The book under review does so. It is a first-rate contribution—a field study,