

Lectures in Physics

Statistical Mechanics. A Set of Lectures. R. P. FEYNMAN. Notes taken by R. Kikuchi and H. A. Feiveson. Jacob Shaham, Ed. Benjamin, Reading, Mass., 1972. xiv, 354 pp., illus. Cloth, \$17.50; paper, \$8.95. *Frontiers in Physics*.

In the heroic days at Symphony Hall there were those who declared that they would stand in line for hours merely to hear the Boston Symphony play scales. I must admit to similar feelings about R. P. Feynman: I would drop everything to hear him lecture on the municipal drainage system. Feynman's research has set the idiom and tone of postwar theoretical physics, and his inimitable pedagogy, from popular lectures through freshman physics and on up, is a joy to behold.

It may therefore only be because my views verge on idolatry that I find the voice of Feynman rings out through the transcriptions of the notetakers, and startling points of view and novel illuminations are to be found. There are expositions of Feynman's own work on path integral techniques, the polaron problem, and superfluidity, as well as essays on superconductivity, the electron gas, the Ising model, and the familiar canon of more elementary topics. In short, what the book presents is statistical mechanics as it was in the late 1950's and early '60's.

But areas of the subject that have flowered in the last decade are not touched upon, which is somewhat amiss in a series that takes as its unifying theme that "the problem of communicating in a coherent fashion the recent developments in the most exciting and active fields of physics seems particularly pressing today." (One exception: there is a discussion of the remarkable theory of phase coherence in superconductors of B. D. Josephson—whose name, inexplicably, is not mentioned.)

Thus nothing is said about the broad developments in our understanding of critical points, which have received so much attention in the last ten years: the Onsager solution of the Ising model is presented as an elegant mathematical exercise. The devastating implications of the form of the solution for any simple theory of any critical point are not mentioned, nor are the results of the extensive experimental and numerical studies of recent years. Nonequilibrium problems and work on the foundations of the subject, to name two

other areas of vigorous recent progress, are also overlooked.

No doubt, these omissions are in part matters of taste, in part consequences of the need for selection in so sprawling a subject, but they are also, I think, a sign of an overall preoccupation with the subject as it existed over a decade ago. On these terms, one can have no quarrel with the book. If the title of the series were changed to "Milestones in Physics" and the series editor would deign to write a preface appropriate to the volume at hand, I could write a review in which every paragraph was as breathless as the first.

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Anthropology in the Arctic

Circumpolar Problems. Habitat, Economy, and Social Relations in the Arctic. Proceedings of a symposium, Luleå, Sweden, and Tromsø, Norway, Sept. 1969. GÖSTA BERG, Ed. Pergamon, New York 1973. xiii, 194 pp., illus. \$19.50. *Wenner-Gren Center International Symposium Series*, vol. 21.

The 22 papers published in this volume were written as contributions to a symposium arranged by the Nordic Council for Anthropological Research. Anthropologists from most countries with arctic areas under their jurisdiction were invited to participate. There was no Canadian participant, but research in arctic and subarctic Canada is represented by the work of two U.S. scholars. There is no underlying theme or focus uniting the papers in this book, and coverage is extremely broad. Five contributions are devoted to archeological problems, 13 to culture change and economic development, and two each deal with ethnographic and ethnohistorical data.

The archeological papers, devoted to research in northern Scandinavia, the Soviet Union, and Alaska, are disappointing. Four are concerned primarily with specialized regional issues and do not come to grips with current problems in arctic archeology. The fifth, by Helge Larsen, compares the economy, settlement patterns, and social structure of the coastal Tareormiut and inland Nunamiut of northwest Alaska, a subject of basic theoretical

importance to Eskimo culture history. Larsen's comprehensive account is weakened, however, by failure to consider the most recent archeological and ethnographic interpretations concerning the two groups.

The contributions dealing with culture change and economic development provide a useful summary of the most significant research being conducted by anthropologists in all northern regions. Of particular interest is a paper by Vilhelm Aubert comparing the relationship between Lapps and the greater Norwegian society with that of Greenlanders and Danish society and noting the problems that result when marginal peoples lack control over their own lives. Dealing with a timely subject, Margaret Lantis traces the development and accomplishments of the current nativistic movement involving Alaskan Eskimos, Indians, and Aleuts with respect to such major issues as land claims and oil revenues. John Honigmann describes the ethnic composition of Inuvik, an administrative center at the mouth of the Mackenzie River, and problems related to employment, education, and future participation by native peoples in the developing economy of the Canadian north. Rolf Kjellström provides a wide-ranging summary of Swedish Lapp culture change together with an analysis of the effects of migration to urban centers in search of wage employment.

Emphasizing more traditional ethnographic descriptions and interpretations, Juha Pentikäinen presents a detailed discussion of Lapp cultural diversity. Ethnohistorical analysis of Lutheran mission population records and hunting statistics maintained by the Danish government since 1873 has enabled Robert Petersen to interpret changing settlement patterns and hunting conditions in three districts of West Greenland.

Unfortunately, most of the papers in this volume are without maps, and there are no general maps of arctic regions to orient the reader even though many of the papers deal with areas little known even to arctic and subarctic specialists. It is apparent that many of the contributions were not written in English, but there is no statement concerning responsibility for the translations, which, in some cases, are poor. The uneven quality of the contents will cause little difficulty for the area specialist, but the nonspecialist should be warned that the symposium

does not constitute an adequate overview of current social scientific research in northern regions. In particular, the considerable and sophisticated archeological and ethnohistorical research being conducted in all areas of the north is not reported here. The volume does, however, provide an excellent summary of the range and inclusiveness of research on culture change and economic development. Readers, specialist and nonspecialist alike, will note with satisfaction that in all the northern regions scholars are actively engaged in defining patterns of development and assessing the environmental and cultural impact of current government programs.

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Books Received

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The Amateur Photographer's Handbook. Aaron Sussman. Crowell, New York, ed. 8, 1973. xiv, 562 pp., illus. \$8.95.

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