sion of research on this subject in the past ten years.

Some of the papers are interesting samples of the authors' work that lead the reader to extensive results published elsewhere. Others are comprehensive works themselves. One example of the latter is a paper by Hansen, Lacis, Rind, Russell, Stone, Fung, Ruedy, and Lerner, which is by far the longest paper in the volume. It presents results of extensive experiments in which a general circulation model of the atmosphere was used to test the relative importance of many feedback mechanisms. In addition, it presents new theoretical work that adds greatly to our understanding of the transient response, the rate of change of climate in response to, say, increasing atmospheric carbon dioxide. The two next longest papers in the book, by Rind and Barry *et al.*, also use the general circulation model to test feedbacks. These three papers illustrate the utility of theoretical computer models for the study of a system that is not amenable to actual physical experiments.

Some of the other papers present analyses of data on past climate change. Such analysis is another important technique for the study of feedbacks. With actual data, however, it is much more difficult, and impossible in many cases, to isolate the important feedback mechanisms and test their relative importance, since all are acting at once.

The book is a necessity for anyone actively engaged in or contemplating research on climate change.

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Early Towns of Europe

Farms, Villages, and Cities. Commerce and Urban Origins in Late Prehistoric Europe. PETER S. WELLS. Cornell University Press, Ithaca, N.Y., 1984. 271 pp., illus. $32.50; paper, $14.95.

The author of this book draws on the wealth of archeological publications on the late prehistory of central Europe (approximately 1000 B.C. to A.D. 1000) to formulate his main thesis, that exchange and commerce were decisive factors in the establishment of the early towns of Europe beyond the Mediterranean world.

During the Roman Empire (A.D. 0 to 400) classical societies were also in existence north of the Alps, and these influenced deeply the medieval development of the area of study. Wells rightly stresses the continuity between the Iron Age and subsequent periods but devotes only 20 pages of the book to the first millennium A.D. This is clearly the weakest part of the work. The archeological material of that period, much of which is from richly furnished graves, lends itself to consideration of social hierarchies and of contacts between princes and magnates. Though it is more difficult to understand the economic basis of the lifeways of the major groups of society, information on the subsistence economy is actually very rich for the first millennium A.D., though less easily accessible. A study of this material might have led the author to consider more seriously factors other than commerce in the development especially of those towns that continued after A.D. 1000. In particular, local marketing, craft production, religious institutions, and administration come into focus for such successful centers, most of which, unlike the Iron Age towns, have survived till present times.

The author's specialty is the early Iron Age, about 800 to 400 B.C., and this and the following phase are treated in much detail. Against a late Bronze Age background a thorough presentation is given of the interesting archeological material, arranged according to major themes such as manufacturing or distribution of wealth. The author painstakingly translates the information into a text that reads quite well though full of scholarly terms and references to localities of finds. We also hear of things more meaningful to the unprepared reader, like the princely town-fortress of Heuneburg in southern Germany, which traded with the Greek colony at Marseille. In a chapter on the later development an account of the impressive Celtic town of Manching, also in southern Germany, is presented. This site traded with Roman Italy in the dynamic period just before the legions marched into the region. Wells stresses the intermediate phase of raiding and migrations that took the Celts, for instance, to Delphi in Greece, where they sacked the famous temple of the oracle, and to Rome itself in search of booty and fame.

The author is poised between two traditions of archeological research. The first is a continental European one, characterized by firm control of the evidence and providing the specialist literature but less dynamic and imaginative when it comes to social and economic interpretation of the data. The other is a newer, English-American tradition that seeks to interpret archeological finds in terms of social change. Oriented toward social anthropology, this tradition has, as its basic weakness, difficulties in coming to grips with historical reality, particularly with diversity. In the present case we note the reverence of the author for the European, mainly German, scholarship. Yet one would have liked to see the data from this tradition studied more deeply, rather than only summarized within a framework derived from the other tradition.

Clearly Wells's intention has been to produce a book useful for the reader who is seeking acquaintance with the problems of early European society. To this end the work is lavishly furnished with illustrations and has a long (59 pages) bibliography. All in all Wells has done a fine job of summarizing in a scholarly manner interesting archeological evidence much of which is for the first time made available in English.

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