

Book Reviews

Population and Culture Change

Population Growth. Anthropological Implications. Proceedings of a colloquium, Philadelphia, March 1970. BRIAN SPOONER, Ed. M.I.T. Press, Cambridge, Mass., 1972. xxviii, 426 pp., illus. \$15.

Since the publication of Esther Boserup's seminal work *The Conditions of Agricultural Growth* (Aldine) in 1965, the notion has been permissible, indeed fashionable, among students of the past that population growth was the cause, not merely the result, of many of the basic changes which have taken place in human societies. Where Malthus's view long held sway, that the available resources (often seen as fixed or predetermined within certain limits) governed the viable population density, Boserup vigorously argued that the population density itself determines the intensity of the farming technique. The development of labor-intensive methods giving a high yield per unit area of land is thus seen as the consequence of population increase, now viewed as the independent variable.

In retrospect it is astonishing that this reversal of Malthus's view should not have been offered much earlier and that the whole subject has been so little discussed in anthropology until very recently, despite the publication of Sir Alexander Carr-Saunders's *The Population Problem* in 1922. In view of the complexity of most living systems and their feedback mechanisms, Boserup's notion of population as an independent variable is highly questionable, since human societies are no less complex than living organisms. Yet Boserup's liberating ideas have proved very stimulating to research.

The present volume, comprising papers presented at a conference on "Population, Resources, and Technology," shows how seriously these ideas have been taken up. In such a work one looks first for further insights into the mechanisms by which population increase modifies the structure of societies. Second one would like some

analysis of how this "independent" variable is supposed to vary—just what governs the population density at any given time and place? And third, and most crucial of all to the historian or the archeologist, how accurately and confidently can we measure past population densities? This indeed is the key question. For some *independent* evidence of population density is required, without any reference to the type of agriculture that was practiced or to the changes in the structure of the society which we desire to explain. Otherwise the outcome may simply be a total circularity, using changes in structure or subsistence mode to infer changes in population density and these changes in population to explain the developments in society. The risk then is that demographic studies of past societies may take on a persuasive force essentially metaphysical in character, while doing little to relate effectively to the basic archeological or historical record.

On the first of these counts this book scores very high. Population growth is used persuasively, in a number of contributions, to make intelligible the changes seen in early Mesopotamia and Mesoamerica, nearly every author recognizing and stating the dangers of viewing population density as an independent variable and stressing instead the significance of feedback. A welcome feature is the willingness to think of population effects upon social organization and ultimately on the religious beliefs of the society, as well as on more obvious aspects such as settlement, subsistence, and technology. As Robert McC. Netting summarizes his argument (p. 241): "It is possible to say that the growing pressure of population on circumscribed resources may render adaptive not only agricultural intensification but also a rudimentary political centralization under sacral leadership."

A number of authors have usefully taken up Lewis Binford's stimulating thought that the origins of farming lay in population increase. This increase is

regarded as the consequence of change to a sedentary way of life (based largely on marine resources) among pre-farming communities, in the Near East and elsewhere, at the end of the Pleistocene.

Disappointingly, however, there are no attempts to establish a link in *quantitative* terms between population increase and its consequences in any aspect of society, other than a useful formulation by Robert L. Carneiro on agricultural carrying capacity.

The second desideratum—an understanding of the factors that govern population density—is far from fulfillment. This is a problem which will ultimately be solved by demographic, genetic, and ecological studies upon living populations. It is indeed strange how little we yet know about human fertility and its cultural modulation by regulators such as infanticide and marriage age. Articles by Solomon H. Katz and John D. Durand very usefully present current understanding of these matters, but we shall need to know a great deal more about the principles of human demography before we shall understand changes in past populations.

Very few authors have here directed themselves to the third problem, the accurate assessment of early population levels. A number offer estimates that are plausible enough, but that bear little obvious relationship to the data base. David O'Connor's study of ancient Egypt does, however, clearly present the data used for the estimates, and discusses the difficulties involved.

Both these serious shortcomings, however, do not arise so much from the treatments here offered as from the intractability of the subject matter itself. The papers, taken together, are conspicuously successful in making clear, for the first time, the crucial importance of this much neglected field of study. Well edited and presented by Brian Spooner, they offer a real advance in our understanding of culture change. Spooner and his contributors fill one of the most glaring lacunae in modern anthropology and archeology. They make an altogether convincing case that population growth is one of the fundamental causes of culture change. What we still do not begin to understand is how, when, and why population increases—and why it so often doesn't.

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