Book Reviews

Determinants of Human History

The Human Condition. An Ecological and Historical View. WILLIAM H. MCNEILL. Princeton University Press, Princeton, N.J., 1980. viii, 82 pp. $8.50.

The Fates of Nations. A Biological Theory of History. PAUL COLINVAUX. Simon and Schuster, New York, 1980. 384 pp. $12.95.

Is there a field of ecological history? These books by an ecologist (Colinvaux) and a historian (McNeill) provide sweeping explanations of human history, even though the driving mechanisms are different. McNeill's thin volume consists of two Bland-Lee Lectures delivered at Clark University in 1979; it summarizes and develops his own brilliant *Plagues and Peoples* (Doubleday, 1976). Colinvaux's book is more ambitious.

For Colinvaux, history happens because of an ancestral breeding strategy that lets every couple raise the number of children it can afford. Physiology sets no effective limit to human reproduction: "It is claimed that a healthy woman can give birth to twenty-five children" (p. 36). The human family was usually less because social behavior imposed diverse forms of restraint, including infanticide and taboos. But each couple is programmed to produce the children to fill the available niche space, and mortality cannot prevent it. When resources are available, the population expands. Ecology's first social law is that "all poverty is caused by the continued growth of population" (p. 71); and the second is that "aggressive war is caused by the continued growth of population in a relatively rich society" (p. 93). The author lists 14 propositions "predicted by the ecological hypothesis" which account in detail for the fates of nations. Quoting the first and last propositions should suffice to give the flavor: "Middle and upper classes will be the first to feel the pressures of crowding (p. 85). . . . Collapsing empires will have rigid caste hierarchies and stagnant military techniques" (p. 94). Armed with these propositions, Colinvaux proceeds to interpret history, from the battle of Marathon to the Blitzkrieg, and to predict the future. The reader will be reassured to know that the ecological hypothesis predicts "that there can be no war of aggression which involves a clear attack by either the United States or the Soviet Union on the other" (pp. 330–331). There is apparently no important historical event that cannot be "predicted" by the ecological hypothesis. Take for example the expansion of Islam: After Muhammad abolished infanticide, a restraint on breeding, "another of the wars of aggression started because the people needed land" (p. 181).

Human reproduction is not as abundant as Colinvaux believes. It seems extraordinary on the part of a biologist to believe that breeding consists of "culling" the 25 children that a "healthy woman" could have. The combination of much lower fertility (an average of seven or eight children in the infrequent case of a woman married throughout her reproductive life for documented populations of the past) and high mortality must have as a rule kept populations precariously balanced through most of history. Where McNeill, for one, gives their due to disease and political upheaval, Colinvaux holds the role of mortality in history as insignificant. For example, for McNeill, the population of the Roman Empire declined in the second century A.D. because of epidemics; for Colinvaux, the breeding strategy makes this impossible. He claims that historians have mistaken rural-urban migration for depopulation of the Empire. "Depopulating the countryside is the expected consequence of feeding large city populations through massed agriculture" (p. 160). The Empire became too crowded and, having "relapsed into a police state with very high maintenance costs," it fell, in accordance with proposition 14. Only after the collapse was the population forced down, "across decades of privation . . . through a failure to breed." After technological progress in European agriculture, restraints to breeding were relaxed, and growth started again after 1600, leading to colonial conquest and war on the Continent. The view of demographers who have attributed the modern rise of population to a decline of mortality is in conflict with known animal and human breeding strategies and demonstrably wrong, says Colinvaux. "The simple truth is still that the more spectacular part of our growth in numbers happened before health care, in the seventeenth and eighteenth centuries" (p. 246).

It seems now established that it is after 1750 that the growth of Western population started and that a decline of mortality was responsible, although its causes are still in doubt. (For McNeill, the rise occurred when infections became more homogenized throughout the world and lethal epidemic diseases became endemic in Europe.) The breeding strategy—if such it is—that can be identified, the European pattern of marriage, seems to have tended to limit growth even in the 19th century. But here, at least, hard statistical evidence on the components of growth exist and a demographic argument can be substantiated. It is much harder to assess the relation between growth and aggression or poverty at other times and places. What were the demographic roots of Alexander's conquests or the Punic wars? What was the breeding strategy of Gengis Khan's Mongols or Gustavus Adolphus's Swedes? The predictions of the ecological hypothesis are no substitutes for hard data. Does ecology explain human affairs? How do peoples determine their niches? Are aggression and poverty the result of demographical determinism? These are interesting but unanswerable questions. Colinvaux has written an entertaining book, full of provocative analogies and trendy anachronisms. But as science or history it should not be taken too seriously.

McNeill explores the importance of microparasitism and macroparasitism (the latter is when people seize goods or compel service from other people) in shaping history. He describes an urban transmutation when civilized concentrations of humans became adapted to the disease environment and a commercial transmutation when the relation between rulers and businessmen altered in Europe to yield a market-regulated system. This is a skillfully summarized story, and it should incite to read McNeill's more detailed work.

E. VAN DE WALLE
Population Studies Center, University of Pennsylvania, Philadelphia 19174