

Book Reviews

Population and World Politics. Philip M. Hauser, Ed. Free Press, Glencoe, Ill., 1958. 297 pp.

The Grassland and Fodder Resources of India. R. O. Whyte. Indian Council of Agricultural Research, New Delhi, 1957. v + 437 pp. Illus. \$5.

Although these books were not intended for simultaneous review, I am fortunate in having both at hand. They complement each other well. Both deal with tensions arising from an unbalance without known precedent in the long course of biological history. Both agree that solutions are technically conceivable but point out that the fundamental obstacles are cultural, coming from human values and behavior. One thinks inevitably of the concluding words of Brown, Bonner, and Weir in *The Next Hundred Years*—"whether man can learn to live with man."

The 12 chapters in *Population and World Politics*, including an introduction by the editor, are the outcome of the Thirtieth Institute of the Norman Wait Harris Foundation, held at the University of Chicago in 1954. While the lapse of four years has produced some changes, notably in official Chinese population policy, the discussion is essentially fresh. It is grouped into three parts—"World population and resources"; "Population, levels of living, and economic development"; and "Population policy and politics."

Part I, by Durand, Notestein, and Woytinsky, fully documents the present population explosion. It makes clear the difficulties of long-range projection and the complication arising from the growing, widespread demand for better levels of living. Earth's resources are held to be capable of sustaining a larger population than they now do, if managed with proper skill and prudence. The prospects of anything better than limping progress are pictured as unlikely, however.

Part II, by Kuznets, Hagen, Thomas, and Spengler, is the most technical, but it is eminently valuable for the insight it affords as to practical operation in demography and economics. Available data leave much to be desired, and assumptions—presented with great candor

—are necessary. Even so, it seems clear that no invariant relation between numbers and welfare—or progress—can be safely assumed.

Part III, by Davis, Lorimer, Taeuber, and Wright, is naturally the one of greatest interest to the general reader. It discusses the conditions in the free and Communist "worlds" and in the "underdeveloped" areas now being wooed by both. The phenomena of population are integral to this dynamic situation, but again not in any uniform or predictable way. That they cannot be ignored is certain, and meanwhile the situation is complicated by the absence of reliable information from important areas. Curiously, we are told that the principal population problem of the United States is the overpopulated countries. I doubt whether this rules out the probability that our skill and intelligence in distributing and planning for our own internal population may greatly affect our future position in international affairs.

The volume by Whyte, of the Food and Agricultural Organization of the United Nations, and his Indian collaborators deals with an area classically overpopulated by man and beast, both ultimately dependent upon the vegetable kingdom. Plant life, the source of sustenance, has been sorely punished by the resulting pressure. Besides the obvious effects on yield of overgrazing, the use of manure for fuel, and the accompanying soil depletion and destruction, nutrient values have suffered from changes in botanical composition of herbage.

India possesses what is essentially forest climate, grading abruptly into scrub and desert, without the intervening natural grasslands found in America and elsewhere. But human activity has resulted in the extensive development of secondary grasslands of various types. The forests that remain have, where they are accessible, suffered from uncontrolled grazing and other abuse.

While the ecological relationship of plant, animal, and man is clear and direct, its effective operation is thwarted by religious sanctions that had their origin under earlier and far different conditions of economic necessity. Existing taboos make it almost impossible to bring about any massive reduction in the num-

bers of substandard cattle. But until this is done and nutrient levels are raised, no efforts at genetic improvement can possibly succeed.

The botanical chapters show that India does have a great variety of indigenous and foreign plants which could afford excellent grazing under proper management. Even so, the monsoon climate is such that legume fodder must be available to carry through periods of low pasture production. But capital requirements to remedy mineral deficiencies, as well as the excessive subdivision of landholdings, render such a program exceedingly difficult, even were the cattle population to be streamlined.

Despite the clear evidence of what might be done through the application of existing ecological knowledge, the volume, with its vivid photographs, is as depressing as it is challenging. The potential richness of the great Indian peninsula lies helpless under the weight of cultural inertia whose very sophistication makes it almost proof against change. As an eminent Indian scientist expressed it to me, "The problems of my country are all but insoluble." I have heard much the same comment from an American who has registered great achievements in a troubled foreign land.

Yet this does not justify the abandonment of hope and friendly effort. Much as India might gain from the benefits of Western science and technology, I for one suspect that the West might learn much from her. A good teacher must know how to listen as well as expound.

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Electrical Discharges in Gases. F. M. Penning. Macmillan, New York; Philips' Technical Library, Eindhoven, Netherlands, 1958. viii + 75 pp. Illus. \$3.

The subject of electrical discharge in gases, now generally denoted by the broader title *gaseous electronics*, received a renewed life in the early 1920's when techniques using pure inert gases and clean electrodes were initiated by G. Holst and E. Oosterhuis at the Philips Research Laboratories, Eindhoven, Netherlands. This work was ably carried forward after 1924 by the brilliant team of F. M. Penning and M. J. Druyvesteyn, who worked on its experimental and theoretical aspects, respectively. Though World War II diverted Druyvesteyn to other work, Penning continued until his retirement and death in 1953.

This book was written by Dr. Penning and appeared posthumously in 1955 in Dutch and has since been translated into French, German, and English; the latter