

AMERICAN ASSOCIATION
FOR THE
ADVANCEMENT OF SCIENCE

Board of Directors

CHAUNCEY D. LEAKE, *Retiring President, Chairman*
THOMAS PARK, *President*
PAUL M. GROSS, *President Elect*
HARRISON BROWN DON K. PRICE
HENRY EYRING ALFRED S. ROMER
H. BENTLEY GLASS WILLIAM W. RUBEY
MARGARET MEAD ALAN T. WATERMAN
PAUL A. SCHERER, *Treasurer*
DAEL WOLFFLE, *Executive Officer*

Editorial Board

KONRAD B. KRAUSKOPF H. BURR STEINBACH
EDWIN M. LERNER WILLIAM L. STRAUS, JR.
PHILIP M. MORSE EDWARD L. TATUM

Editorial Staff

DAEL WOLFFLE HANS NUSSBAUM
Publisher Business Manager

GRAHAM DUSHANE
Editor

JOSEPH TURNER ROBERT V. ORMES
Associate Editor Managing Editor

ELLEN E. MURPHY, *Assistant Editor*

NANCY TEIMOURIAN, *Assistant to the Editor*

News: HOWARD MARGOLIS, DANIEL S. GREENBERG, PATRICIA D. PADDOCK

Book Reviews: SARAH S. DEES

Editorial Assistants: SUB E. BERKE, NANCY S. HAMILTON, OLIVER W. HEATWOLE, EDGAR C. RICH, JOHN E. RINGLE, CONRAD YUNG-KWAI

Staff Assistants: LILLIAN HSU, MARION Y. KLINE

Advertising Staff

EARL J. SCHERAGO, *Director*

BERNICE SCHWARTZ, *Production Manager*

Sales: RICHARD L. CHARLES (New York, N.Y., PE 6-1858); C. RICHARD CALLIS (Old Bridge, N.J., CL 4-3680); HERBERT BURKLUND (Chicago, Ill., DE 7-4973); DILLENBECK-GALAVAN (Los Angeles, Calif., DU 5-3991)

SCIENCE, now combined with THE SCIENTIFIC MONTHLY, is published each Friday by the American Association for the Advancement of Science at National Publishing Company, Washington, D.C. SCIENCE is indexed in the *Reader's Guide to Periodical Literature*.

Editorial correspondence should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts. Opinions expressed by authors are their own and do not necessarily reflect the opinions of the AAAS or the institutions with which the authors are affiliated. For detailed suggestions on the preparation of manuscripts, see *Science* 125, 16 (4 Jan. 1957).

Advertising correspondence should be addressed to SCIENCE, Room 1740, 11 West 42 St., New York 36, N.Y.

Change of address notification should be sent to 1515 Massachusetts Ave., NW, Washington 5, D.C., 4 weeks in advance. Furnish an address label from a recent issue. Give both old and new addresses, including zone numbers.

Annual subscriptions: \$8.50; foreign postage, \$1.50; Canadian postage, 75¢. Single copies, 35¢. School year subscriptions: 9 months, \$7.00; 10 months, \$7.50. Cable address: Advancesci, Washington.

Copyright © 1961 by the American Association for the Advancement of Science.

Poverty's Millionaires

It seems fair to assume, in thinking about technical assistance to underdeveloped regions, that a man whose daily diet consists essentially of two meals of rice, hot in the evening and the cold remains in the morning, needs no one to tell him that he wants more to eat. Yet that there are men in just this circumstance who do need such advice is one of the paradoxes of technical assistance described by Kusum Nair in her recent book *Blossoms in the Dust* (Duckworth, London). The author, an Indian journalist, spent a year, as she says, as a "nobody," visiting a sample of India's rural communities to determine the expectations and attitudes of some of the people on the receiving end of India's development effort.

In the example just cited, Kusum Nair asked the untouchables of one community—they were the persons who, for hire, actually worked in the fields—how much land they would want if the government were to give it to them free. The replies: Samu, five in the family, 1½ acres; Rangarajan, five in the family, 2 acres; Manickam (the exception), six in the family, 5 acres; Srinivasan, four in the family, 2 acres; and so on and on. Actually, these replies were calculated not on the basis of ownership but on that of a system of tenant farming. The acreage asked for was supposed to provide, for each member of the tenant's family, the requisite two square meals of rice a day, and to allow for giving about half the produce to the owner of the land.

The section of the country to which this community belongs is at least distinguished by its enthusiasm for irrigation. In another section, one in which millet is grown and in which rain is the traditional source of water, the great majority of land owners would not use the water made available for irrigation by a new hydroelectric project, even when despairing project officials offered to let it into the fields for them. With a yield sufficient for local consumption, the owners are more impressed by the increased cost and effort required for increased production—the use of irrigation, for example, also requires the use of fertilizer—than by the resulting increase in production.

Although the book is concerned with India's problems with her rural communities, the lesson taught by what the author calls "poverty's millionaires" may apply as well to American programs of technical assistance to other countries. The lesson is that when the technical mission returns from the field with its recommendations as to where to place the dam and where to string the power lines, the job of planning is only half done. Attention must be paid not only to the physical resources of a region and to how those resources might be utilized, but also to the attitudes held by the natives of the region and to how those attitudes might be changed.

Moreover, just as there is no universal development plan suitable for all regions, so there is no universal method of persuasion suitable for all communities. The book catalogs a great variety of responses to technical assistance, including among them even enthusiasm. It is heartening to note that in one particularly primitive section of India there were villagers who, in rice cultivation, as soon as they were introduced to the plow, demanded the bulldozers of which they had dimly heard, in order to clear land more rapidly.—J.T.