



Field Studies of Nutrition and Behavior

AAAS Symposium • 27 December 1969 • Boston

In the survival, adaptation, and development of human societies, behavior affecting nutrition is of fundamental significance. Yet, in spite of this factor, there have been few field studies of such behavior, especially of studies relating the behavior to its physical and biotic as well as social setting. These investigations are needed both for the contributions they can make to our general understanding of human ecology and evolution and for the practical implications they have for specific economic development and anti-poverty programs. The papers in the symposium on "Field Studies of Nutrition and Behavior" report on some of the few field studies that have been made recently in primitive, peasant, and developing societies around the world and are intended to illustrate the utility of such research from both theoretical and practical standpoints.

Although the speakers in the symposium are formally identified as anthropologists, geographers, nutritionists, and medical scientists, all of their

studies are, properly speaking, ecological, that is, they focus upon the relations between living organisms (human beings) and their environments. Thus, the cultural anthropologists and geographers in the symposium are concerned not with cultures themselves, but rather with human populations as components of ecosystems and biotic communities. When cultural practices such as infanticide and earth eating are dealt with, they are treated not as exotic expressions of essentially inexplicable cultural values or interests but rather as features of a people's relations with the other ecosystemic components from which they draw the energy and materials upon which their biological survival and success and economic development depend.

The focus of the papers is more on populations than on individuals. With this focus, it becomes possible to "make sense" of much social or cultural behavior related to nutrition, behavior which might seem senseless or irrational if analyzed with reference to the nutritional requirements of individuals alone. Consideration of certain practices of the Maring people of New Guinea can

serve to illustrate this. Many Maring men inherit, as part of a complex of magical formulae, a taboo on eating some of the wild animals hunted in the forest. From a clinical standpoint, we would judge application of this taboo to a man suffering from an advanced tropical ulcer to be unsound and irrational. The exclusion of a source of high-quality protein from his diet, which otherwise contains only relatively small amounts of protein and usually from vegetable rather than animal sources, would be to his nutritional disadvantage, delaying if not preventing his recovery. But viewing the operation of the taboo in the context of protein needs and shortages for the population as a whole, we see that the prescription on the men's consumption of hunted game has the beneficial effect of making more of the scarce animal protein available to categories of people who especially need it: women, who are likely to be either lactating or pregnant, and growing children. In other cases, perhaps particularly under conditions produced by rapid change in developing societies (as, for example, in the Brazilian plantations described in

Above: Meat distribution among the Karimojong of Uganda. [Neville Dyson-Hudson, Johns Hopkins University]



one of the symposium papers), an inadequate diet for growing children may be the result of having to allocate a disproportionate amount of the limited available food to adult male wage-earners in order to sustain their performance on physically demanding jobs created by new technologies.

The papers in the symposium are, for the most part, the products of multidisciplinary research. There may come a day when the study of the interaction of cultural, environmental, and human biological variables in ecosystems including human populations will constitute a distinct discipline, but, as long as approximately the present division of labor in the sciences prevails, the validation or invalidation of hypotheses such as are put forward in the symposium papers will require the coordinated collection of data on diverse variables by workers from a variety of fields. The papers themselves attest to the feasibility of such coordinated, multidisciplinary research on problems of nutrition in relation to behavior and indicate the kinds of advances in knowledge to which the research can lead.

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Topics and Speakers

Field Studies of Nutrition and Behavior among African Bushmen, Richard B. Lee (Harvard University).

Prey Size and Food Avoidance among the Senoi Semai of Malaya, Robert K. Dentan (State University of New York, Buffalo).

Social Responses to the Limited Availability of Protein among the Gadio Enga of New Guinea, Mark D. Dornstreich (Columbia University).

Some Effects of Maternal and Child Feeding Practices among the Maring of New Guinea, Georgeda Buchbinder (Columbia University).

Geophagy among the Ewe People of Ghana, Donald E. Vermeer (Louisiana State University).

The Distribution of Food Resources in the Herding Economy of the Karimojong of Uganda, V. R.

Dyson-Hudson (Johns Hopkins University) and Neville Dyson-Hudson (Johns Hopkins University).

A Field Model for Predicting Childhood Malnutrition in Developing Countries, Arlene Fonaroff (Georgetown University) and L. Schuyler Fonaroff (University of Maryland).

The Ecology of Malnutrition in a Rural Community in Tanzania, John R. K. Robson (University of Michigan).

Technological Change and Caloric Costs in Northeastern Brazilian Sisal Plantations, Daniel R. Gross (Hunter College) and Barbara A. Underwood (Columbia University).

Intervention and Naturalistic Approaches in Field Studies of Nutrition and Behavior, Herbert G. Birch (Albert Einstein College of Medicine, Yeshiva University).

Hunger and Malnutrition AAAS Symposium • 26-29 December 1969 • Boston

26 December

Arranged by Jean Mayer (Harvard School of Public Health).

Introduction and Survey, Jean Mayer:

Panel Discussion: Joaquin Cravito (Hospital de los Enfermos de la Nutricion, Mexico City); Arnold Schaefer (HEW) and Charles E. Goodell (U.S. Senator, New York).

27 December

Surveillance of the State of Nutrition, Roger Revelle (Harvard School of Public Health).

Panel Discussion: John H. Brown (New York State Department of Health); Mark Hegsted (Harvard School of Public Health); and H. L. Sandstead (Vanderbilt University).

Nutrition and Degenerative Diseases, Fredrick J. Stare (Harvard School of Public Health).

Panel Discussion: Jules Hirsch (Rockefeller University); Albert Kattus (University of California, Los Angeles); Ancel Keys (University of Minnesota).

28 December

Nutritional Problems of Special Groups within the United States and Related Territories, Robert S. Harris (M.I.T.).

Panel Discussion: William J. Darby (Vanderbilt University); Helen Ger Olson (Indian Health Service, Silver Spring, Maryland); and Nevin S. Scrimshaw (M.I.T.).

Nutritional and Economic Problems of the Aged and the Sick, Charles Glenn King (Columbia University).

Panel Discussion: Jack Geiger (Tufts University School of Medicine); Willard Krehl (University of

Iowa College of Medicine); and Donald Watkin (Veterans Administration Hospital), West Roxbury, Massachusetts).

29 December

Food Habits and the Economies of Food Distribution, Colston E. Warne (Amherst College).

Panel Discussion: George Brandow (Pennsylvania State University); James Carmen (Consumers' Research Institute); and Johanna T. Dwyer (Harvard School of Public Health).

The Changing Significance of Food, Margaret Mead (American Museum of Natural History).

Roundtable Discussion: Norman Desrosier (National Biscuit Company); Robert Choate (National Institute of Public Affairs); and Effie Ellis (Ohio State Department of Health).