Health, Society, and Social Science

By Robert Straus and John A. Clausen

Abstract: Throughout the United States and elsewhere in the Western world since World War II, there has been a growing interest in medicine. As early as the 1930's, popular accounts of scientific developments began to interest lay readers in medical care and innovation. The significant involvement of social and behavioral scientists in medical education and research began a decade ago and has increased rapidly. It has become apparent that the understanding of health and disease requires a holistic frame of reference in which the psychological, social, and cultural aspects of human behavior are appropriately related to the biological nature of man and the physical environment in which he lives. Emphasis upon the holistic approach to medical science and upon comprehensive health care has moved medicine to seek the services of social scientists, notably in connection with public health, preventive medicine, and psychiatry. And, as conceptualization and methodology in the social sciences have matured, social scientists have increasingly tended to interest themselves in applied fields and have come to grasp the significance of health and medicine as a major focus of organized human behavior. Thus, medical science, social science, and popular interest merge to formulate contemporary approaches and norms in health care.—Ed.

For biographical information, see the biographies with the separate articles by Professors Straus and Clausen later in this volume.

DURING the last fifteen years or roughly the period since World War II, there has been a growing interest in medicine on the part of society at large in the United States and in other areas of the Western world. At the same time, there has been a rebirth of interest on the part of the formal medical professions in the social and cultural aspects of health and medical care. These trends are reflected in the popularization of information about medical science, in the growing public expectations directed toward organized medicine for the prevention and alleviation of human misery, and in the increased demand for medical care coming from all segments of the population. They are reflected in the increased role of government in providing controls to safeguard the public health, in supporting programs of health education and research, in providing direct medical services for large segments of the population, and in adopting legislation concerned with the economic barriers to medical care. They are also reflected by an expansion in the horizons of medical research to include studies of social, cultural, and psychological factors in the course of human disease and by the introduction of social- and behavioral-science content and concepts to programs of education for health personnel. For example, in 1957 the Council on Medical Education and Hospitals of the American Medical Association revised its "essentials of an acceptable medical school" to add human behavior to its list of subjects required as "basic knowledge" in medical education. There have been parallel movements in nursing and dental education. In increasing numbers, sociologists, anthropologists, and psychologists have been added to the faculties of colleges of medicine, nursing, and, more recently, dentistry.

The significant involvement of social and behavioral scientists in medical education and research began only a little more than a decade ago and has increased rapidly. Today, in the United States alone, several hundred social scientists are employed directly by hospitals, health departments, and programs of education for the health professions. In addition, social scientists who are engaged in research on problems pertaining to illness or health raise the number of individuals who may be classified as "medical social scientists" well above a thousand. This development is related to a number of significant trends involving society, medicine, and the social sciences. Although these movements can each be distinguished from the others, all are interdependent and help to explain the emergence of health and medicine as a recognized major system of human behavior in our culture.

The late medical historian, Henry E. Sigerist, has noted: [1]

> It is important to know that the medical ideal has changed a great deal in course of time and is evolving constantly. As a result, medical education can never reach definite forms but is obliged to adapt itself to changing conditions. Every society required of its physician that he have knowledge, skill, devotion to his patients and similar qualities. But the position of the physician in society, the tasks assigned to him and the rules of conduct imposed upon him by society changed in every period. The physician was a priest in Babylonia, a craftsman in ancient Greece, a cleric in the early and a scholar in the later Middle Ages. He became a scientist with the rise of the natural sciences, and it is perfectly obvious that the requirements put upon the physician and the tasks of medical education were different in all these periods.
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> We must keep in mind that the picture

[1] Henry E. Sigerist, *The University at the Crossroads* (New York: Henry Schuman, 1946), p. 107.

a society has of its ideal doctor—the goal of medical education—is determined primarily by two factors: the social and economic structure of that society and the technical means available to medical science at that time.

With this in mind, it is not surprising that society's concept of medicine and medicine's self-image, beginning with the latter part of the nineteenth century and throughout the first half of the twentieth century, would be characterized by a preoccupation with the purely organic aspects of disease and with concentration on the treatment of specific biological and physical causes. This period witnessed a dramatic break-through in the understanding of health and disease involving basic discoveries concerning circulation and asepsis, anesthesia, and chemotherapy, all of which have made possible programs of preventive medicine and medical and surgical intervention which have altered the nature and distribution of health problems throughout the world. In the United States, the average life expectancy was increased by twenty-five years in a period of only fifty years between 1900 and 1950.

MEDICINE AS A SOCIAL SCIENCE

In considering the nature of modern medicine and current trends with respect to the relationship between medicine and the social sciences, it is important to remember that the social sciences themselves had not become identifiable disciplines in the nineteenth century. However, medicine at that time employed many concepts and values which, in retrospect, can be considered those of the social sciences. Without the knowledge and techniques of modern biological and physical science, the medical practitioner of a hundred years ago tended to be much more concerned with aspects of medicine which today would be classified as psychological or sociological or anthropological. Medical literature of the nineteenth century provides many rich examples of studies which can be classified as having what we would call today social-science orientation. These include such classics as Peter Panum's dissertation on an epidemic of measles in 1846,[2] Snow's description of a cholera epidemic,[3] Pettenkofer's essays on "The Value of Health to a City," [4] and numerous other essays or studies, many of which are now obscure, which related specific health problems to the way of life of a people, including factors of occupation, family structure and housing, prevailing attitudes and beliefs, and other sociocultural considerations.

Not infrequently, medicine has been referred to as a social science, as in the following statement by Sigerist in 1945: [5]

> That medicine is a social science sounds like a truism, yet it cannot be repeated often enough because in medical education we still act as if medicine were a natural science and nothing else. There can be no doubt that the target of medicine is to keep individuals adjusted to their environment as useful members of society, or re-adjust them when they have dropped out as a result of illness. It is a social goal. Every medical action, moreover, presupposes a relationship between at least two individuals, the patient and the physician, or between two groups, society on the one hand, and the medical corps, in the broadest sense of the word, on the other hand.

[2] Peter Ludwig Panum, *Observations Made During the Epidemic of Measles on the Faroe Islands in the Year 1846* (New York: Delta Omega Society, 1940).

[3] John Snow, *Snow on Cholera* (New York: The Commonwealth Fund, 1936).

[4] Max von Pettenkofer, "The Value of Health to a City," two lectures delivered in 1873, translated from the German by Henry E. Sigerist, *Bulletin of the History of Medicine,* Vol. 10 (1941), pp. 473–503, 593–613.

[5] Henry E. Sigerist, *op. cit.,* p. 127.

It is important to remember that, during the period when physicians were commonly oriented to the social and cultural implications of disease, the dimensions of the community were relatively limited and the relationship of the physician to his patients more intimate. However, with industrialization and urbanization came an increase in the size and complexity of communities and in the degree of impersonalization in human relationships. As a result, the physician has found himself less well equipped to understand the nonphysical aspects of illness. This has unquestionably contributed to a need for social-science specialists in medicine.

The emergence of medicine from a preoccupation with the biological and physical aspects of disease has coincided in time with the maturation of the behavioral sciences which, by the 1940's, began to command respect for conceptual and methodological rigor. It is interesting to note that some of the first social scientists invited to participate in medical programs were asked to provide consultation for clinicians with respect to research methodology.

In the application of the biological and physical sciences to medical problems, it has become increasingly apparent that the understanding of health and disease requires a holistic frame of reference in which the psychological, social, and cultural aspects of behavior are appropriately related to those of the biological nature of man and the physical environment in which he lives. It is also recognized that the currently pressing problems of medical investigation seldom lend themselves to conceptualization solely within the framework of traditional independent disciplines. Concurrent with the trend toward a more holistic approach to the understanding of the causes and course of human disease, there has been a growing emphasis on a comprehensive approach to the management of health problems and the organization of medical care. During the early part of the twentieth century, while medicine was struggling to assimilate the vast amount of new knowledge produced by the biological sciences, there emerged patterns of specialization in medical practice with a tendency toward the fragmentation of medical care among independent specialists. Emphasis was placed on specific diseases, specific organs, and specific patients; the relationships of personality, society, and culture to organic disease were commonly overlooked. The comprehensive approach to health care requires a broader perspective on health and disease, a more adequate conceptualization of human behavior as such, if it is to facilitate the organization of health resources to deal with the total health of the patient through the co-operative effort of specialists and allied personnel. It calls for integrated and continuing planning which incorporates prevention, rehabilitation, and long-term care as well as diagnosis and treatment of specific symptoms.

Two additional trends within medicine which have influenced a resurgent interest in the social aspects of health and disease have been, first, the increasing emphasis on public health and preventive medicine and, second, the emergence of psychiatry as a major specialty of medicine. In medical education, departments of psychiatry and of public health and preventive medicine were the first to seek the services of social scientists, and, until very recently, most social-science activity with respect to health problems has been primarily concerned with the fields of psychiatry and public health.

The field of public health, like the rest of medicine, has been in a state

of continuing flux in response both to technological development and to broad changes in society itself. At the turn of the century, public health was primarily concerned with quarantine and with those kinds of sanitary problems which were responsive to engineering. The primacy of providing quarantine against infectious disease has today been displaced by an emphasis on mobilizing health resources to deal with chronic illness. Today's problems of "sanitation" include radioactivity, smoking, air contamination, stressful living, and toxic components in certain forms of cosmetics, food, and even medicine itself. All are complex problems with important psychological, social, and cultural variables. All have attracted increasing public interest and concern.

Hand in hand with these developments has come a great expansion of support for health services at all levels of government. With the establishment of the National Institute of Mental Health in 1946, mental health was officially recognized as a basic ingredient of public health. Whereas the provisions by state governments for the mentally ill were largely limited to custodial institutions prior to World War II, most states now have well-developed mental-health programs which include educational and preventive services. Large-scale public programs aimed at producing sound health practices and organizing effective community facilities and programs can, however, succeed only if they are based on an accurate knowledge of the current status of public information, attitudes, and practices. In this area, the social scientist, working closely with health personnel, has helped define the nature of current practice and need. Funds for social-science research have been provided both by the operating agencies and by many of the foundations supporting research in medical and health-related fields. Fortunately, such support has not been limited to applied research activities; many of the most basic contributions to social-science research in the past decade have come through support provided by organizations whose ultimate goal is the improvement of health status.

MEDICINE AND THE GENERAL PUBLIC

The general public's increased interest in medical progress and in problems of medical care is reflected in and has undoubtedly been greatly influenced by the popularization of medical information. For long periods of history and in many cultures, formal medicine has been veiled in secrecy. Knowledge about therapeutic methods and agents has been jealously guarded and revealed only to qualified practitioners acceptable to a self-perpetuating cult. Under such circumstances, it has been common to find that technological advancements in medicine have met with considerable resistance not only on the part of the general public but frequently on the part of practitioners as well. Some major discoveries have lain dormant for hundreds of years until they could find acceptance in the prevailing ideas of society. As recently as the 1920's, programs to provide protection from the scourge of smallpox through vaccination met with strong public opposition in many areas, and resistance is still found in some parts of the world. Currently, efforts to introduce the benefits of fluoridation are frequently met with overwhelming public rejection.

However, beginning in the 1930's with the writings of Paul de Kruif and others who have interpreted scientific developments in language generally understandable to lay readers, there have been a growing awareness on the part of the population at large of advancements in medical care and a tendency toward greater acceptance of in-

novation. With this has come an increase in the expectations which lay members of society direct toward the medical profession. The popularization of medicine has become so widespread that some therapeutic agents have been demanded by the general public before their efficacy has been well established. This phenomenon was well exemplified during the 1950's when, in many communities, there were organized marches of mothers demanding that gamma globulin be made available for their children as a preventative agent for poliomyelitis, despite the fact that this agent's efficacy in the case of polio had not and still has not been demonstrated. Nevertheless, the force of public opinion resulted in the diversion of the nation's supply of gamma globulin to programs of polio immunization with the result that this lifesaving substance was unavailable for use in the modification or prevention of such diseases as measles, hepatitis, or whooping cough with which its efficacy was well established. The fact that measles, hepatitis, and whooping cough claimed many more victims than poliomyelitis had little effect against the popularization of the polio "cause." A similar impact on popularization has been seen in the pressure which patients have placed upon physicians to provide open prescriptions for penicillin and other antibiotics and the pressure for the use of cortisone and various hormone therapies with a variety of health problems for which validity has not yet been established. Public interest in medicine has not been restricted to involvement with therapeutic agents and methods. The public, in addition, has become increasingly aware of and concerned with the nature and distribution of health resources and with patterns of medical practice and with problems of medical economics. The physician, who has always enjoyed high status in our society, has been subject to increasing public evaluation and criticism, much of which has focused around the nature of his role in society and his personal relationship with patients. Concern over his "public image" has led the physician, individually and collectively through his professional societies, to take an increasing interest in the relationship of medicine to society.

CHANGING ORIENTATION OF THE SOCIAL SCIENCES

Still another significant trend concerns the social sciences themselves. As conceptualization and methodology in the social sciences have matured, there has been an increasing tendency on the part of social scientists to become interested in applied fields. During the early part of the twentieth century, when sociology, anthropology, and psychology were seeking acceptance as sciences in the academic community, most representatives of these disciplines shied away from involvement with practical problems and applied research. Emphasis was on purity of conceptualization; those who were concerned with the application of their concepts to social problems were often looked upon with disdain. Even though social scientists were interested in man's major social institutions such as the family, government, education, and religion, it is significant that they gave virtually no attention to health and medicine. Although anthropologists, in studying primitive cultures, did record behavior concerned with health, this was often primarily classified under the category of religion or magic. Inconceivable as it may seem, until the 1940's most students of modern society completely overlooked the significance of health and medicine as a major focus of organized human behavior. A thorough examination of major social-science writings

prior to 1940 clearly reveals this void.

Notable exceptions should be mentioned. For nearly fifty years, the sociologist Michael M. Davis has been actively studying the economics of medical care.[6] Bernhard J. Stern, perhaps the father of medical sociology, first studied the vaccination movement in the 1920's.[7] Following this, Stern published several volumes relating patterns of medical practice to technological development and to changes in the structure of society and its cultures.[8] In the 1940's, Oswald Hall, Odin W. Anderson, and Leo W. Simmons were among the first social scientists to hold appointments in medical institutions. At about the same time, several multidiscipline research programs concerned with specific health problems began to employ social scientists. Among prominent social-science theorists, Talcott Parsons was probably the first to delineate a conceptualization of medical practice as a major system of behavior.[9]

During the 1950's interest in the study of medicine on the part of sociologists, anthropologists, and some social psychologists moved rapidly. Starting with a handful of sociologists who first identified as an informal committee in 1954, the Section on Medical Sociology of the American Sociological Association has grown to a membership of more than 800 individuals in 1962, representing sociology and the related disciplines. Papers reporting research on health, mental health, and medicine are appearing regularly in all of the recognized social-science journals,[10] in many of the general health and medical journals, and, with increasing frequency, in journals devoted to specific health problems. The *Journal of Health and Human Behavior,* launched in 1960, is devoted specifically to relating medicine and the social and behavioral sciences.

Today, the relevance of social-science principles and concepts to medical research, to medical education, and to patient care is clearly recognized by social scientists and by a growing segment of medical personnel. In addition, social scientists see medicine as a major system of human behavior providing valuable opportunities for the testing, modifying, and extending of social-science theory and for the integration of sociological concepts with those of the biological sciences in a collaborative search for a better understanding of processes of human behavior. In medical research, the behavioral sciences are basic to a truly holistic approach. For physicians and other health personnel, an awareness of concepts and principles from the social sciences and their application to problems of patient care and the organization of health resources is essential to the practice of truly comprehensive medicine.

THE PRESENT VOLUME

In planning and soliciting contributions to this volume of THE ANNALS, we have sought both to provide general

[6] For Davis' most recent monographs, see Michael M. Davis, *America Organizes Medicine* (New York: Harper and Brothers, 1941) and *Medical Care for Tomorrow* (New York: Harper and Brothers, 1955).

[7] B. J. Stern, *Should We Be Vaccinated?* (New York: Harper and Brothers, 1927).

[8] For example, B. J. Stern, *Society and Medical Progress* (Princeton: Princeton University Press, 1941) and *American Medical Practice in the Perspectives of a Century* (New York: The Commonwealth Fund, 1945).

[9] For a summary and elaboration of Parson's earlier writings on this subject, see Talcott Parsons, *The Social System* (Glencoe, Ill.: The Free Press, 1951), pp. 428–479.

[10] For example, Volume 337 of THE ANNALS (September 1961) was devoted to a collection of papers under the general title *Meeting Health Needs by Social Action.*

perspectives for examining the interrelationships of medicine and society and to focus more sharply on certain of the areas which social science has helped to illuminate in the past decade. To this end, the volume has been divided into four major sections: Society and Medicine: Perspectives (historical, sociological, cultural); The Organization of Medical Resources; Education for the Health Professions; and Health and Human Behavior. Perhaps only the last of these section headings needs any comment, since it alone embraces a widely diverse set of papers. The first three sections are primarily concerned with delineating the forces shaping medical needs and services, the patterns of professional training, and the multiple sets of expectations that are in play within the medical context. In the final section are gathered papers which seek either to report or comment on the work of behavioral scientists within this field or to examine specific linkages between the sociocultural order and the phenomena of health and illness.

Many topics of social-science involvement in research on health and medicine are unmentioned or at most lightly touched upon in this collection of papers: for example, the maintenance of health regimes for the chronically ill, the varied aspects of rehabilitation as these relate to family and community supports for functional autonomy and social participation, the influence of cultural attitudes in many areas of specific health practice. These are topics on which significant research has been done, but the confines of the present volume do not permit their representation. So also it has seemed advisable to forego any attempt to represent the field of mental health, which should be an integral part of any treatment of health and medicine. Its problems and prospects have, in the past, received special consideration in THE ANNALS and may be expected to receive such attention in the future.