

# THE CONFERENCE ON CAUSES OF MENTAL DISORDERS: A REVIEW OF EPIDEMIOLOGICAL KNOWLEDGE, 1959

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**W**ITHIN the past two decades there has been such a marked growth of interest in developing methods for preventing and treating mental disorders that the financial resources supporting relevant research have, at times, outstripped the capacity of the professions to provide properly qualified investigators. For it is extremely difficult for anyone to get a clear perspective on the kinds of actions which might profitably be taken in the attack upon mental illness. To arrive at this perspective requires the ability to sift the large bodies of a very varied literature in order to pick out the few examples of well-planned investigations. This ability, in turn requires a scientifically developed understanding of the phenomena of mental illness and the knowledge to distinguish the phenomena from the plethora of theoretical formulations and speculations about the mysteries these illnesses represent.

The ability to develop effective preventive work in the mental disorders can only stem from the process of clarifying these mysteries. Over a hundred years ago this same process was developed by the forerunners of today's public health professionals to investigate the nature of the then mysterious afflictions which attacked men's physical bodies. The process of clarification has become today's science of epidemiology, the basic tool of preventive medicine whether it be directed to men's minds or men's bodies.

As the reader of this book will soon become aware, many pieces of evidence have been, and are being, gathered by many different kinds of professional people: statisticians and physicians, administrators and psychiatrists, sociologists and psychologists, and even professional epidemiologists. However,

regardless of who gathers the data, and regardless of who is drawing the conclusions, and regardless of what any particular investigator calls this "clarification of mysteries," conclusions concerning the physical, psychological or social forces affecting the occurrence of a particular mental disorder are epidemiological conclusions.

In 1959, the Milbank Memorial Fund, conscious of the rapid growth in professional interest and of the volume of new data that had appeared in the last ten years, asked eight distinguished authorities to prepare review articles summarizing the present state of knowledge about different kinds of causes which had been thought to lead to mental disorders. These eight papers form a convenient classification. This convenience cannot, and should not, hide the fact that each of these divisions interacts and impinges upon the others. Nevertheless the convenience of a classification which tends to correspond to areas of competence amongst today's professions, and the consequent ability to have prepared systematic, critical, careful reviews of the available evidence regarding the relationship between postulated cause and particular disorder, far outweighs the disadvantages.

The papers were circulated to sixteen participants at a two-day meeting where they were discussed, having been read previously by the participants. At the meeting, each paper was initially reviewed by a discussant, whose remarks opened an hour-long general exchange of ideas on the topic under consideration. These opening remarks together with a summary of the general discussion which ensued, will be found following each paper and will give the reader an opportunity to see the response of 16 experts to the stimuli of the review papers.

The methodology of conducting investigations was not discussed although some critical evaluations of the suitability of certain methods were.<sup>1</sup>

<sup>1</sup> Those interested in such matters are referred to the following items:

Reid, D. D.: *EPIDEMIOLOGICAL METHODS IN THE STUDY OF MENTAL DISORDERS*. Public Health Papers No. 2. Geneva: World Health Organization 1960. 70 pp.

These papers provide a stock-taking of our present state of knowledge regarding the epidemiological evidence about the causes of mental disorders.

The viewpoint implicit behind the discussions reported here is that the application of scientific methods to the problems of mental disorder will lead us to the development of effective preventive methods. No particular theory or viewpoint about the nature of mental disorders or their causes is expounded here. What will be found is a critical appraisal of established knowledge regarding the distribution of mental disorders in populations. To these appraisals are added ideas on the research needed to settle those outstanding issues which suggest that various physical, social, or psychological factors are of great importance in the production of particular disorders. No proposals, however, will be found which attempt to translate these appraisals into action programs to affect the amount of mental disorder occurring at the present time.

Finally, the bibliographies appended at the end of each chapter are selective of the most important data relevant to the review paper in question and are not to be considered as exhaustive.

The Milbank Memorial Fund would like to use this opportunity to express its deep appreciation to the participants at this Round Table meeting and particularly to the authors of the review papers who put into their preparation all of the accumulated experience and all of the knowledge and judgment

Some general discussion on methodology will be found in:

"Report of World Health Organization Study Group on Schizophrenia—Geneva, September 9–14, 1957." *American Journal of Psychiatry*, 115, 865–872 (April, 1959).

Discussion of current investigations and issues which investigators would wish to see examined further are reported in:

COMPARATIVE EPIDEMIOLOGY OF THE MENTAL DISORDERS. Proceedings of the 49th Annual Meeting of the American Psychopathological Association, New York City, February, 1959. (Eds.: Paul H. Hoch and J. Zubin). New York: Grune and Stratton (in press).

FIELD STUDIES IN THE EPIDEMIOLOGY OF MENTAL DISORDERS. Proceedings of the Work Conference on Problems in Field Studies in the Mental Disorders [held in New York City] February 16–19, 1960, under the auspices of the American Psychopathological Association (Ed.: J. Zubin). New York: Grune and Stratton (in press).

of their very full lives as to where we stand in understanding the processes which lead to mental disorder.

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I. *Jan A. Böök, M.D.: Genetical Etiology in Mental Illness.*

This examination of the existing evidence for genetic factors in mental illness is concerned with three areas: First, an analysis of the relationship between specific genes and specific disorders emphasizing the concept of "inborn errors of metabolism" as exemplified by phenylketonuria. Second, a detailed review of the evidence of genetic factors in schizophrenia which concludes that major gene differences do exist, but that they must be viewed as leading to a capacity for the disorder with other, and as yet unknown, factors postulated as operating at the same time as the genetic factor. The role of genes in the manic-depressive parallels that of genes in schizophrenia; and it appears clear that there must be significant biological differences between the two syndromes since schizophrenia does not occur with an increased frequency among relatives of manic-depressives and vice versa. Finally, Dr. Böök concludes that progress in the area of medical genetics can only be expected through studies of conditions which are closely linked to specific gene disturbances using a diagnostic method that identifies an almost one-to-one relationship with the causative mutant gene. Present diagnostic criteria in the most prevalent and important mental disorders are inadequate for genetic studies because they do not define and delimit the disease entity clearly.

II. *Brian MacMahon, M.D.: Physical Damage to the Fetus.*

A detailed review of the available evidence linking the occurrence of mental disorders of various types with the action of a wide range of specific agents acting during fetal development (infections, radiation energy, jaundice, asphyxia, nutritional deficiencies), is followed by discussions of prematurity, complications of labor, and complications of pregnancy as nonspecific agents connected with later mental disorder or deficiency. The literature on descriptive associations between month of birth, birth order, maternal age and other descriptive characteristics are also reviewed. While the evidence relating a

number of infections is sufficient to justify preventive action, Dr. MacMahon makes it clear that many of the details are obscure and that evidence is lacking which would link number of agents which are otherwise known to be potentially harmful to the increased risk of mental abnormality. In particular, little is known about the increased risks associated with conditions which do not show manifestations of disorder in the perinatal period.

III. *George James, M.D.: The Epidemiology of Mental Disorder Associated with Damage to the Brain After Birth.*

Jaundice, anoxemia, ischemia, trauma, many poisons (including alcohol) and not a few of the medicinal drugs, and several infections, have been associated with temporary or permanent impairment of mental functioning as have a number of dietary and endocrine deficiencies, epileptic convulsions and cerebral arteriosclerosis. The epidemiological evidence for these causal links is reviewed and it is emphasized that very often the available evidence lacks refinements which would be desirable. Dr. James concludes that the greatest number of mental patients who suffer from organic brain damage were damaged from diseases which we still do not know how to prevent.

IV. *John Cumming, M.D.: The Family in Mental Disorder.*

This "incomplete essay" (so-called since it reviews only a portion of the very large number of studies which have tried to link the development of a mental disorder with a particular characteristic of the patient's family or family member) goes into less detail in criticizing the methodology of these investigations than in pointing out that the questions have often been too imprecisely stated to make research productive of answers. Dr. Cumming's discussion seeks to mark out a path through the present chaos in the field and to suggest ways of relating the studies to one another so that future investigations will be more productive.

V. *D. D. Reid, M.D.: Precipitating Proximal Factors in the Occurrence of Mental Disorders.*

This review concludes that the field lacks any sustained and sys-

tematic approach to the problem of precipitating factors. Dr. Reid believes that while the most valuable studies have been made of stress in wartime, events which occur in civilian life have not been absolved: they have only been insufficiently examined.

VI. *H. Warren Dunham, Ph.D.: Social Structures and Mental Disorders.*

The evidence which links an individual's position in the social structure in which he lives to the risk of manifesting mental disorders is examined; and a number of critical studies are woven into a reasoned discussion of both methodological and theoretical issues. From this evidence it is clear that the relationship between social class position, occupation, and a number of other similar factors, and the frequency of certain mental disorders (in one or another form of treatment) is very marked and well established. The causal meaning of these associations is still uncertain. The problems connected with exploiting the clues suggested by these associations, and the problems involved in closing the gaps in our knowledge about them, are amply classified and clarified, both by Dr. Dunham and by the group in the ensuing discussion.

VII. *H. B. M. Murphy, M.D.: Social Change and Mental Health.*

Since the Enlightenment it has been repeatedly claimed that rapid social change was productive of mental disorders. The evidence advanced in support of this thesis, is separated into two concepts: 1. Change as a specific factor in the production of certain cases of mental disorder. 2. Change that is disturbing to everyone but which produces a clinical form of the illness only in presently or potentially sick persons. This extensive review of the very large literature on migrating populations and populations undergoing social change now permits one to ask many different and more precise questions. Dr. Murphy concludes that non-Western peoples undergoing Westernization show an increase in identified psychopathology. However, whether this is due to an increase in prevalence or to improved facilities or other factors is not clear. The problems of investigating these questions are dealt with at some length.

VIII. *Alexander H. Leighton, M.D.: Cultures as Causative of Mental Disorders.*

Eleven different ways in which culture is thought to increase the frequency of particular mental disorders is examined and a review of the evidence for each type of linkage is examined separately. This classification is expounded together with examples of studies, no one definitive, which are directed at testing each theory. The fact that a global, cross-cultural classification of mental disorders does not exist is discussed as a gap in the technical resources for studying these issues.