FORMAL DISCUSSION

SUMMARY AND CRITIQUE

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The economic aspects of mental health and illness are two-fold. The first deals with an analysis of the costs of treatment and preventive work and the second with an analysis of the role that economic factors play in mental health and illness. In order to deal adequately with the cost analysis we must first turn our attention to an estimate of the magnitude of the problem.

I. MAGNITUDE OF THE PROBLEM

The mentally ill and mentally handicapped account for more than half of all the hospital beds in the United States on a given day. The 1936 Census of Patients in Hospitals for Mental Disease and of Mental Defectives and Epileptics in Institutions indicates that about January 1, 1937, there were 550,000 patients in residence in the 603 institutions devoted to their care. Some 2,300 physicians, 51,000 nurses and attendants, and 32,000 others, or a total of 85,000 persons were engaged in providing care for these patients and it is estimated that some $166,000,000 were devoted to their maintenance. These figures present only part of the story, since many expenditures incurred by publicly maintained institutions are either unrecorded or not charged against these institutions. Among these are the investment and depreciation charges, and the cost of general administration. Furthermore, not all the mentally ill and mentally handicapped are hospitalized and the cost of the care of these persons to their family and the community is not recorded. An attempt has been made in the advance papers of this session to disentangle some of these very intricate problems and to estimate their magnitude and economic cost.

The mental disorders can not be treated as a unit because they differ considerably from each other in incidence, type of care required, duration and other important factors. The three major divisions of the mental disorders are: mental disease, mental defect and epilepsy. The mental diseases account for the vast majority of the patients in hospitals and institutions, fully 80 per cent falling in this category. Mental defect without psychosis accounts for 17 per cent and epilepsy and other conditions without psychosis for 3 per cent. Because of the variations in the hospitalization rates of the various types of mental disorders, attempts to estimate their total incidence in the population must be made separately for each type. The most adequate data that are available deal with the mental diseases. The estimates made by Landis and Page for the mental diseases alone indicate that on a given day about 1.5 per cent of the total adult population (15 years old and over), or approximately 1,300,000 individuals, are suffering from some variety of mental disease.

The full extent of the problem can be better appreciated when an accounting is made of the number of people in the next generation who will have entered a mental hospital for a longer or shorter period sometime before their death. If present-day trends hold, about 5 per cent of the children born this year will be hospitalized sometime in the course of their lives and about 5 per cent more will be disabled but not hospitalized at some time, bringing the total expectancy of mental disease up to 10 per cent for the entire generation.

Estimates of the true incidence of mental defect and of epilepsy have not been worked out with the same thoroughness as the estimates of mental disease. A smaller proportion of the total number of mentally handicapped than of the mentally ill re-
quire hospitalization, since the majority of
the mentally handicapped can get along in
the community if the demands on their
ability to adjust are not too great. The
number of institutionalized mental defec-
tives is about 100 per 100,000 of the general
population aged 5–49 for the entire country.
It is likely that an equal number requiring
hospitalization are now at large in the com-
community, bringing the total expected hos-
pitalization rate up to 200 per 100,000 of
the general population aged 5–49. For epi-
lepsy the rate is about 20 per 100,000 of the
general population aged 5–54. The other
mentally ill or mentally handicapped with-
out psychosis are chiefly alcoholics and
drug addicts and there are no valid esti-
mates of their prevalence in the population
at the present time.

Other groups of mentally handicapped
or mentally deviate persons are sometimes
included in the category of mental dis-
orders: the psychoneurotics who are at
large, and not hospitalized, the mentally
defective and epileptic who are on the
border line of social sufficiency, criminals,
prostitutes and psychopathic personalities.
A full roster of all these mental deviants, it
is estimated by Falk and Hirsch, would
bring the total up to more than 14,500,000
persons or 10 per cent of the general popu-
lation. While these figures are suggestive
of the size of the problem they must be in-
terpreted with a great deal of caution and
must await more adequate estimates before
they are used for any practical purposes.

The present trend in mental disorders is
difficult to gauge because of inadequacies in
reporting. For the mental diseases, the
experience of states in which reporting is
more adequate indicates that while the total
number of mental patients is on the in-
crease, the proportion of the total popula-
tion being hospitalized has either increased
only slightly or is at a standstill. There is,
however, one disturbing feature in this
trend. While the trend in the younger age
groups remains but little changed, the
trend in the older age groups is increasing
markedly. With the general population in-
creasing in age, the trend in mental illness
might be expected to go up, in so far as
mental disease is an old age problem. It is
estimated, for instance, that if present
trends continue the annual number of men-
tally ill hospitalized for the first time will
double by 1960. Several European coun-
tries, however, show markedly different
characteristics from those in the United
States. In Norway, for instance, the pro-
portion of the hospitalized mentally ill in
the older age groups is considerably smaller
than in this country. Whether the old age
security measures that now obtain in Nor-
way are at the basis of this difference is
well worth investigating. Some comfort
may be drawn from the fact that careful
studies of the expectancy of hospitalization
for mental disease indicate that it is either
at a standstill or even on the decline in
states where preventive efforts are fairly
well established.\footnote{Dorn, Harold F. 1938. The Incidence and Future Expectancy of Mental Disease. U. S. Public Health Service Reports. V. 53, No. 45. Washington.}

II. COST OF TREATMENT OF THE MENTALLY
DISORDERED AND EXPENDITURES FOR
PRESERVING MENTAL HEALTH

The expenditures for the mentally ill and
mentally handicapped are made largely
through three agencies: (1) the hospital or
institution, (2) the clinic and (3) the pri-
vate practitioner. The first agency deals
largely with those who are already so sick
that they require hospitalization, while the
other agencies deal largely with either
ambulatory patients or those who are in the
incipient states of their illness. Expendi-
tures for the latter may therefore be re-
garded as preventive in nature.

The total current expenditures attributa-
able to mental disorders, exclusive of invest-
ment and depreciation charges on capital
outlay, are estimated by Davis to be $182,-
118,000 or an annual expenditure of $1.50
per man, woman and child in the general
population. The expenditures for hospitals
alone amounted to $166,000,000. Compar-
ing this figure with the $738,000,000 that is
spent annually for all hospitals, it appears
that mental disorders, with more than half
of all hospital patients, has as its share only one-fifth of the total amount spent on hospital care.

Fully 90 per cent of all the expenditures for mental disorders are spent through the mental hospitals and institutions. Some 3 per cent goes to the clinics and 7 per cent to physicians in private practice. In other words, only 10 per cent of all expenditures for the mentally ill goes for what might be termed preventive services given by clinics and private practitioners to whom the public at large can come for help. The remaining 90 per cent is spent for the care of cases after the development of definite mental disease. These proportions do not hold for the entire country. In some regions, especially the southern and central regions, the amount spent for this "preventive work" is much lower than even 10 per cent.

The primary source of the funds for maintaining services for the mentally disordered is governmental taxation—accounting for more than 75 per cent of the total; the other 25 per cent comes from private sources. Of the governmental expenditures about 90 per cent of the total is borne by the states. State funds thus account for fully two-thirds of all the expenditures for mental disorders.

The "preventive activities" are paid for largely by private funds. This holds true not only for the payment of the services of private practitioners but also for the maintenance of clinics. Only half of the expenditures of the clinics are provided by governmental sources while in the case of the hospitals more than 80 per cent of the expenditures come from governmental sources. It is likely that if these preventive activities are to be increased, either the government will have to provide the funds, or more active participation on the part of the general public will have to be encouraged.

In the above accounting of hospital expenditures only the expenditures that are reported annually by the institutions are included. In addition to the maintenance expenditures for patients in institutions there are the costs of general administration of the state hospital system and of the execution of various laws relating to persons with mental disorders; and the annual charges for interest on the value of the hospital plant, and the annual charge for depreciation and obsolescence. These costs are not usually included in calculating the maintenance expenditures for institutions, but they are tangible outlays that must be reckoned with in the estimate of the total cost of mental disorders. There are no adequate estimates of the administrative costs and of the interest charges for institutions for mental defectives and epileptics but Pollock has provided estimates for the hospitals for mental disease.

Assuming that the per capita expenditures in the rest of the country are on the average five-sevenths of the expenditures in New York, it is estimated that the total current expenditures (including overhead and charges on capital investment) for the maintenance of patients in hospitals for mental disease is $231,000,000. If we can make the added assumption that the per capita expenditures in the institutions for mental defectives and epileptics are not materially different from those in the hospitals for mental disease, the total current expenses for all types of mental disorders come to about $277,000,000. This is about one-tenth of the total medical bill of the country.

We have not yet taken into consideration the economic loss due to the elimination of future earnings of the patients who become incapacitated through mental disease, and the cost of caring for mental patients at large in the community. Pollock estimates that the loss of future earnings of first admissions during 1937 amounted to $553,000,000 and that an additional $332,000,000 was expended for the care of patients in the community, making a total of some $885,000,000 lost over and above the actual cost of maintaining patients in the hospital. According to these figures the toll exacted annually by the mentally ill is well above a billion dollars. If we were to add to this figure the loss due to all types of mental deviation including the proportion of the expenditures for crime, prostitution and its
associated venereal disease, suicide, alcoholism, drug addiction, as well as the loss of earnings of the patients in these categories, it is estimated by Falk and Hirsch that the total bill to the nation would be more than three billion dollars, or nearly as much as is spent for all types of medical care.

We have obtained a complete picture of the incidence and cost of mental disorders. We can now turn our attention to estimating the efficiency with which these expenditures have been administered.

Many hospital administrators depend primarily on a low per capita cost as a way of indicating the efficiency of their institution, but what constitutes efficiency often depends upon how far we look ahead. Low per capita costs, as Bryan points out, may really be more expensive to the state in the long run. For example, low per capita cost may be attained by eliminating all types of preventive activities such as clinics and parole services and by limiting the hospital staff to the in-patient service. The additional staff required for the extra-mural work naturally tends to raise the cost per resident patient. But it is an increase that is well justified, since in the long run the extra-mural activities will tend to decrease the future expenditures of the state in the area served by the hospital. It is expenditures of this kind that bring later dividends in the lowered rates of admission. Another example of questionable economy is the tendency to build tremendous hospitals in the hope that the per capita expenditure will decrease thereby. Bryan, however, maintains that no saving in per capita costs is gained by increasing the hospitals beyond 2,500 beds in size. Indeed, he holds that there is a definite loss, in that intimate contact between patients and physicians is precluded in the large hospital plants with a consequent lengthening of hospitalization. This of course leads to more expenditures in the long run.

An example of the effectiveness of expenditures for experimental work is afforded by the reduction of hospitalization time through the use of hypoglycaemic therapy in schizophrenia. On the basis of figures presented by Malzberg, the net rise in the recovery rate after allowing for relapses is about 7 per 100 under treatment. Applying this rate to the 21,700 first admissions of dementia praecox patients during 1936, it would appear that some 7 per cent of this number, or 1,500 patients, would be brought back to the community over and above the number that would be returned under usual treatment. The maintenance expenditures for each of these patients for his entire hospital life, estimated at ten and one-half years on the average, would amount to some $2,700 per patient. It is apparent that a total of some $400,000 would be saved annually and a grand total of $4,000,000 eventually on the first admissions of schizophrenics if hypoglycaemic therapy were introduced into all hospitals. The eventual annual saving to be expected from hypoglycaemic therapy alone would more than cover the total annual budget of $3,000,000 that is devoted to research in mental diseases today.

A growing tendency exists to extend family care for the mentally ill. This name is given to the system of care under which selected mentally ill or mentally defective patients are boarded out in families other than their own.

The strongest appeal of family care to the general public is probably its economic aspect. If this method of care can be developed in the United States to the extent that it has been developed in European countries it will probably obviate the need for the building of an ever increasing number of institutions. The cost of maintaining a patient under family supervision is estimated by Miss Crutcher at $6.50 per week. The cost of maintaining a patient in a state hospital in the state of New York amounts to $12 or $13 per week, including the interest on the money invested in the hospital plant, depreciation of building and equipment, cost of hospital administration as well as the cost of medical care and maintenance in institutions. During the last year with an average of only 486 mentally ill patients in family care, New York State saved approximately $152,000 or $333 per patient. Despite the apparent saving to be gained from family care it is a strange
commentary on psychiatric progress that since the first enactment of provisions for family care in this state some 20 years ago, it has been utilized only in the case of several hundred patients during any year.

III. Economic Forces as Factors in Mental Health and Illness

From the inverse relationship that exists between physical health and economic status one would be led to believe that mental disease should be more prevalent in the population living on the lower than on the upper level of income. There are no data on the entire problem of mental disorders, but the limited data provided by the National Health Survey corroborates this belief.

The incidence of nervous diseases, according to this survey, varies inversely with income, the highest rate being found in the relief group and the lowest rate in the highest income group of $5,000 and over. Taking the higher income group as a basis the rate in the relief population is nearly three times as high, while the rate in the population earning $1,000 and less is twice as high.

Other evidence of the inverse association between economic status and mental health is afforded by an analysis of the occupational level of patients. The proportion of patients coming from the unskilled labor group is higher than the proportion from any other group. Other evidence comes also from investigations dealing with the educational, occupational, housing and marital status of the mentally ill. As would be expected, the mentally disordered are characterized by a generally low educational and occupational level, have a low marital status and come from areas where housing conditions are quite poor. It is difficult at the present time to determine to what extent socio-economic status is a cause or a result of mental health. But to the extent that improvement in educational and consequent occupational status may tend to improve general socio-economic status, it may also tend to preserve mental health. Perhaps improvement in housing facilities and general economic improvement sufficient to raise the marital status may further tend to preserve mental health.

Sudden changes in economic status, such as took place during the recent depression, did not affect markedly the first admission rate to hospitals. Some increase did occur, however, but it might be easily attributed to the influx of patients who were formerly cared for at home, and who because of economic stress had to be sent to the hospital. However, Dr. Malzberg points out that one group of patients, the psychoneurotics, increased three-fold in their first admission rate during the depression. The psychoneurotics admitted to hospitals are the more violent or suicidal type and can not be regarded as a cross-section of the psychoneurotics at large in the community. But if the same increase occurred in the total psychoneurotic group, this would be presumptive evidence of the influence of economic forces on mental health. However, psychoneurotics are the marginally adjusted individuals in society. Only a little tilting of the economic system may be sufficient to bring them to the hospital, and the rise in their first admission rate in depression years may simply be an index of increase in need of temporary hospitalization rather than in incidence of psychoneurosis.

However, economic depressions, through the general hardships, reduced income and unemployment that they bring about in society, tend to prolong the length of stay in hospitals and reduce discharge rates. In this manner, the mental disease burden attributed to economic factors is increased. Furthermore, the recent depression affected not only the adults but also the children, and the full effects of the depression will not be known until these children mature.

It would be difficult to establish on the basis of this type of evidence that economic stress increases mental disease. It is, however, safe to conclude that economic stress tends to bring larger proportions of certain types of persons to the hospital, that it prolongs hospital stay and that it also tends to bring economic factors into greater prominence as presumptive causes in first admissions.

We shall now turn from considering the effect of economics on mental health to the effect of mental health on economics. Men-
Mental health affects the economic structure of society directly in many ways and the threat of the presence of mental maladjustment to our general welfare is an important consideration in a democracy in which attitudes, likes and dislikes and other emotionally conditioned forms of behavior play an important role. Note, for example, the potential source of economic grief that is present in the exaggerated schemes for old age and middle age security that are now making their appeal for votes. The economic burden produced directly by mental illness is small compared to the economic loss produced by such emotionally conditioned factors as accident proneness, job-dissatisfaction, unbalanced competitiveness, and emotional imbalance in general.

The neglect of the emotional factor in industry and in everyday activity is causing the loss of untold millions in either lowered efficiency or retarded progress. One of the indications of the influence of emotional factors on industry and general welfare is the mounting toll that deaths of violence (suicides and accidents) exact annually. Deaths due to suicide and accidents accounted for less than a tenth of one per cent of all deaths 50 years ago. Today they account for fully 7 per cent of the total death rate, a seventy-fold increase in two generations. The losses due to suicides and accidents annually are counted in the millions, when the future earnings of the deceased and the costs of caring for dependents are evaluated and the loss due to the accident itself is taken into consideration. Nearly all medical men agree that mental ill health is at the basis of a majority if not of all the suicides.

The relationship between accidents and mental health is perhaps not as patent. Studies have shown, however, that only 10 per cent of all accidents are due to defects in the machinery and an additional 2 per cent to physical and mental defects in the operator. Fully 85 per cent or more of all accidents are attributable to something in the personality of the operator. Early discovery of the accident-prone employee can lead to the prevention of much economic loss as well as to the prevention of further accidents through therapeutic treatment. Dunbar points out that sometimes the emotional factor works directly and is easily recognized; at other times it masquerades as physical disease. Indeed, from 50 to 80 per cent of all physical disorder is said to be emotionally tinged. Disregard of this emotional component causes economic losses of great magnitude in terms of days lost from work and in terms of loss of support for the families of the patients.

The prevalence of the emotional factor in physical disease has never been gauged adequately but indications of its growing importance come from two sources—mortality and morbidity statistics. The mortality causes that lead the lists in mortality tables are those in which emotional factors are likely to be an etiological or important complicating factor—as for example, illness characterized by disorder of muscle tonus, secretion or circulation. Chronic illness is much more prevalent today than it was 50 years ago and the emotional factor in many types of chronic illness is undeniably important.

IV. PROGRAMS FOR PRESERVING MENTAL HEALTH

The welfare of society as a whole in a democracy depends to a large extent on the mental health of its citizenry. To regard only the hospitalized mentally diseased and mentally handicapped in considering the problem of mental health is to neglect the major part of the problem. The economic loss that the institutionalized patient entails is measurable and, to an extent, controllable. The economic loss due to the mental deviants who are at large in the community can not be curbed nor even measured. A mental health program that does not consider the need for controlling and preventing all types of mental deviation is therefore not satisfactory. Programs for preserving mental health must therefore be sufficient to deal with the various types of emotional disability that according to Falk and Hirsch affect about 10 per cent of the general population.

What can we do to prevent the ever-growing burden of the mental deviant from
weakening the entire structure of our society? The attempts that have been made in this direction will now be dealt with.

First place in the program for preserving mental health belongs to research. Evidence for its effectiveness as a preventive of mental illness is afforded by the campaign against syphilis. It is too early to gauge the effects of the present national campaign. But the experience of such states as Wisconsin where the program has been in effect for two decades indicates the probable trend. In those counties where diagnostic facilities for syphilis were made available and where the medical profession availed itself of these facilities the rate of first admissions for general paresis has dropped to about half of the rate in the entire country. In New York State, too, the rate has decreased 30 per cent during the last two decades in the population aged 20 and over.

Improvement in the economic security of the general population will, no doubt, bring with it a reduction in the proportion of the hospitalized mentally ill. Systems of insurance against unemployment and against old age are steps in the direction of increasing economic security. Workmen's disability compensation and the recently proposed insurance against total disability of the non-industrially employed are further steps in the direction of removing the threat of economic insecurity.

One difficulty that must be faced, however, is the possibility that the systems of insurance or of compensation would themselves tend to become pathogenic agents in producing or prolonging mental disability. At the present time the diseases that are reckoned with in terms of actual or possible insurance are those resulting from lack of nutrition, lack of maternal care and from acute infection, such as venereal diseases, scarlet fever and typhoid. In these diseases the emotional factor is generally not very significant and substantial help in the form of food, housing, medicine, etc., is perhaps the most important factor in cure and prevention. The treatment and cure in the case of mental illness and emotional disturbances can not be made so specific. For this reason, the insurance experience based on other types of disease will not serve as a suitable basis for insurance against mental illness. There are certain characteristics of diseases emanating from emotional disturbances that have to be kept in mind when dealing with this problem of insurance, if we are to avoid the mistakes of other countries in developing our own plans in the extension of medical care.

One way of avoiding any of the ill effects of systems of insurance is to give proper attention to the emotional factors in illness. If, for example, 80 per cent of all serious accidents could be prevented in this way, the economic loss entailed of 400,000 people incapacitated on a given day would be eliminated. One careful study has shown that the emotional factor in all illnesses averaged about 30 or 40 per cent of the total cost. It is difficult to tell whether similar savings would occur in other situations but it is certainly worth while to find out.

It is important to bear in mind that our present methods of diagnosis and therapy, if combined with compensation for disability, may tend actually to increase the total of sickness which lays such a heavy burden on the patient and the community. Safeguards are needed lest the defects in our present practice be crystallized and still further augment the existing burden.

What can we expect from economic measures in the prevention of the various types of mental deviation, if such measures are efficiently introduced? There is a great likelihood that the old age group of psychoses may be lessened as a result of the provision of better physical and mental living conditions. Furthermore, if the experience of Norway is at all significant for our country, the hospitalization of the mentally ill in the old age group will probably decrease as it has in that country, where old age security measures obtain. Instead, the senile patients and those diagnosed now as suffering from psychosis with cerebral arteriosclerosis would be "boarded out" in their own families or in other families, and thus the burden on the state of the ever-increasing number of such patients would be
reduced. It is also likely that the mental deviation due to psychoneuroses, juvenile delinquency and suicide may be affected beneficially. Furthermore, economic security may enable otherwise unstable individuals, such as mental defectives, to remain in the community if the economic means are provided for their maintenance.

Expenditures devoted to mental hygiene activities may also tend to prevent mental illness. A well designed, properly financed program might prevent much juvenile delinquency, some crime, considerable excessive alcoholism, especially of the type induced by psychoneuroticism, and a great deal of potential suicide. The incidence of sex offenses could probably also be appreciably lessened by a forceful mental health program. The provision of better housing is another potential factor in preservation of mental health.

A third possibility for diminishing the burden caused by mental disease is the provision of adequate medical care as well as other types of service for care and treatment of the mental diseases. Millions of psychoneurotics have no facilities for treatment today. There are no resources for hundreds of thousands of children with behavior problems, would-be suicides and psychoneurotic alcoholics. There are great latent possibilities for constructive treatment and curative work with these types of mental deviants.

Introduction of community care systems patterned after Gheel or other European systems would tend to reduce the need for providing more hospital beds and would also permit suitable patients to earn part or all of their expenses by contributing their services to the community. Falk and Hirsch point out, however, that the provision for community care instead of hospitalization carries two potential liabilities:

(1) It is fraught with dysgenic tendencies unless accompanied by competent supervision such as is afforded at Gheel, or by selective compulsory sterilization;

(2) Wages may be lowered and jobs for the normal decreased by the release of mental deviants into the community. Denmark has already encountered the latter liability. But proper safeguards may prevent these factors from affecting adversely our economic structure.

**Summary**

We have shown the vast extent of the mental disorders and the challenge they present to our social-economic welfare.

The actual number of patients in hospitals and institutions exceeds 500,000. The total expenditures for their care and maintenance exceeds $300,000,000. The total economic loss that they entail is estimated at well over a billion dollars annually. But even with the expenditure of these tremendous sums we are not coping adequately with the problem. Only 10 per cent of the current expenditures are devoted to preventive services and only 1 per cent to research. Most of the institutions have not passed much beyond the custodial stage and they continue to add to the total burden by inadequate care and treatment.

The institutions caring for these patients are overcrowded to the extent of 20 per cent and consequently many mentally disordered persons requiring treatment can not gain admission.

Estimates of the total number of individuals suffering from some form of mental or emotional disability is put at 10 per cent of the total population and the economic loss they entail at three billion dollars.

Economic status is a factor in mental disorders, and mental disorders in turn affect economic welfare. This vicious circle must be broken if mental health is to be preserved and the social structure is not to be overwhelmed by the ever-growing burden of the mental disorders.

Steps in this direction are social security, insurance and health measures that are calculated to remove the need for hospitalization on the one hand, and to prevent the occurrence of mental illness on the other hand. These measures entail some hazards but with proper safeguards can help reduce the total burden that mental disorders place upon society.