IS THERE AN INCREASE AMONG THE DEMENTING PSYCHOSES? *

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One dislikes to be a pessimist. The optimist finds greater favor in the world's opinion. The outlook of the pessimist is contracted and discouraging. The optimist is hopeful; he is more apt to have the open vision, and the majority of mankind listen more willingly to his prognostications. In the financial world the public sympathizes with the Bulls rather than the Bears, for the former preach the gospel of good times and encourage belief in the substance of things hoped for. It is therefore in no captious, cynical frame of mind that the question of a possible increase among the dementing psychoses is raised. Genuine scientific interest to know the truth prompts the query rather than a pessimistic spirit that finds in modern psychiatry only a fatalistic trend.

Eliminating the greater longevity of the insane, due to their better care; disregarding the diminished popular prejudice against hospitals for the insane and the consequent accumulation of this class in institutions; making all due allowance for the better statistical recording of the insane now than in years past, still we are confronted with the assertion that insanity is increasing at a more rapid ratio than the population. In what variety of insanity does this inferred increase occur? Is any one type of insanity more prevalent than formerly? Has the character of mental disease changed, or have our methods of study and diagnosis led to a different interpretation? Have a more intensive scientific research, a clearer conception of the psychogenetic causes of insanity operating through constitutionally predisposed or weakened nerve structure modified our conclusions? Under the same conditions as eighty years ago, and disregarding any increase in population, do we find an actual increase among the dementing psychoses, or did the alienist of the forties and fifties of the previous century fail to read aright the symptoms? Do

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we, observing identically the same symptoms as did our predecessors, interpret them differently?

Our evaluation of the diagnostic importance of symptoms has unquestionably experienced a radical change. We no longer place any significance on excitement, exhilaration, depression, confusion, stuporose states, and many other symptoms *per se*, for we know that all these manifestations may characterize any of the phases of mental disease. These phenomena appear and disappear in nearly every phase of insanity, and by themselves possess no great diagnostic value. We must look further than the mere superficial signs. We must dig down deep into the patient's mind, into the psychic life, not only of the patient, but of his antecedents, before pronouncing their true significance. We must discover why individuals react so differently to the same environment—why one man breaks down mentally under stress and another passes through the same ordeal unscathed; why one man's mental integrity at ninety is unimpaired and another's mind gives way at fifty-five or sixty. If from some deep hidden psychogenetic process one man has hallucinations of special sense, we must, if we can, ascertain why this special psychogenetic cause operates as it does in this particular case. Is it because of a certain inherited constitutional make-up, some acquired mental state due to environmental conditions, a toxæmia or other factor? Such investigation may lead to widely varying interpretations of symptoms, the significance of which will depend largely on the nature of the cause, the character of the subsequent morbid process, and more important than all else the inherited predisposition of the individual.

The alienists of fifty years ago undoubtedly made more hopeful prognoses than their successors of the present day. They laid more emphasis on the so-called exciting causes, and placed less importance on the predisposing factors. The tendency of the earlier psychiatrists was to exaggerate the significance of single symptoms. They were very apt to make a diagnosis or prognosis on one symptom, such as depression or excitement, when really these emotional disturbances were only a part of a larger process and not therefore a symptom complex of a disease entity. They were especially narrow in their interpretation of causative influences. Too much emphasis was placed on a single cause to the

exclusion of other factors. This led to a somewhat circumscribed conception of the case. By removal of an apparently conspicuous etiological factor the earlier alienists believed that the patient would recover. If the patient had been a too-ardent Millerite, spiritualist, if he had confined himself too closely to mental or physical work, by a simple withdrawal from these baneful activities it was felt that recovery would surely follow. In reading the reports of these earlier days one is led to the conclusion that not enough emphasis was laid on the constitutional element. One would like to know whether the patient would have had his mental disturbance at all if there had not existed some marked constitutional dyscrasia which predetermined the psychosis. Lugaro's statement that the healthy brain is the most resistive organ in the body; that it will endure more pressure and strain than any other tissue and still retain its recuperative vitality, is undoubtedly correct. Over strain is only likely to induce insanity in a brain predisposed by poor inheritance to feeble resistance.

It would be interesting to know if these so-called recoveries were genuine recoveries; whether these same patients did not suffer relapses and finally become permanently insane. In these earlier days there were genuine recoveries as now, but the asylum reports of that time breathe a hopefulness that we of the present day cannot experience, much as we might desire. Unquestionably modern methods and a change in the psychopathological view point have resulted in classifying many cases among the dementing psychoses that in earlier days would have met with more hopeful consideration.

The statistical tables of the earlier days were very simple affairs, and in reading them one almost envies the apparent ease with which they must have been made. Mania, melancholia, dementia, an occasional hypochondria and hysteria composed the diagnostic tables. Of these mania and melancholia constituted the larger number, while cases called dementia were in the minority. The query arises whether the physician of that day did not include among the manias and melancholias many cases that at the present time would be classified as dementing psychoses. Paresis never appeared in the diagnostic tables. This disease, in the rural districts particularly, must have been extremely

rare. Syphilis as an etiological factor in brain disease was rarely recognized. Indeed, it is very doubtful whether syphilis was as prevalent then as now. Even alcoholism did not appear as a prominent etiological factor. Arteriosclerosis was unknown, and therefore never mentioned.

We must remember that state supervision did not exist at that period; that many of the insane, the epileptic and feeble-minded were cared for at home or allowed to roam at large and consequently were unrecorded. These facts may account for the smaller number of so-called dementias and incurable cases occurring in the earlier reports. But making due allowance for the fact that many cases were not committed to asylums, one cannot escape the conviction that the diagnostic methods of the earlier period lacked scientific precision and were far less accurate than those of the present day, and that for this reason the statistical tables recording diagnoses were to a certain extent misleading.

It is true that the earlier psychiatrists may have frequently erred in their diagnoses and included many dementing psychoses among their manias and melancholias. Giving due credit for such errors in diagnosis, the large number of incurable and dementing psychoses in the statistical tables of the present day is strong presumptive evidence that there is an actual and not a fancied increase among this class of mental diseases. The recoverable and functional psychoses have practically become narrowed down to two groups: manic depressive insanity and infective psychoses.

Among the dementing psychoses an apparent increase occurs in the following forms: paresias, dementia præcox, the various imbecilities, and the presenile and senile dementias. That there is an increase in paresis few will probably deny. Kraepelin says: "A certain increase of paresis may be admitted as highly probable. The experience, especially of large cities, proves this. There the figures are so large and so continually growing, as for instance, the rate of Berlin and Munich, where the male paretics amount to 36 per cent, and in the Charité at Berlin where they reach 45 per cent, that the errors just mentioned are of little consequence. There are twice as many paretics in the city asylums as in those of the country districts. This fact, considering the rapid growth of the city population, makes an increase of paretic affections more probable." Kraepelin's sta-

tistics are confirmed by those of this country, although possibly not to the same extent as in Germany. Recent serological and cytological findings positively connect syphilis with paresis. No longer can there be any etiological uncertainty concerning paresis. Kraepelin affirms: "We can, therefore, to-day with greatest certainty declare that syphilitic infection is an essential for the later appearance of paresis."

The increase of paresis in a general way must mean an increasing prevalence of syphilitic infection in the community. While the larger percentage of paresis occurs in the cities, there is a striking increase in rural districts. In New Hampshire, an agricultural state, whose largest insane population comes from the country, there has been in the state hospital a slow but steady increase of paresis among the commitments. In the Bangor State Hospital, which draws many of its insane from the coast communities, there is a striking prevalence and increase of paresis. In New York State the proportion of paresis to all other forms of insanity is one to eight; in Iowa one to fifteen, which is a marked increase above the proportion of former years. The spread of syphilitic infection becomes therefore a serious contributory factor in the causation of mental disease. Not that every luetic infection entails paresis, but such infection does, if not removed, certainly lower the resistive tone of nerve tissue and so lay the foundation for individual and family deterioration.

Syphilis undoubtedly plays a prominent role among the obscurer causes of insanity. In paresis its influence represents the ten to fifteen-year invasion of the central nervous system after the original infection. Whether this increase of paresis is enhanced by a weakening of nerve structure through alcoholic excesses or the stress of civilization, may be a mooted point. That there is an increase of paresis among the most highly civilized races there can be no doubt. It is quite probable that with the spread of syphilis in the community this disease may be fast becoming one of the chief contributory factors in a variety of dementing psychoses, such as dementia præcox, imbecility, epilepsy, the senile and the presenile insanities. These psychoses occur in brains of feeble resistance and possibly demonstrable convolutional brain simplicity. That syphilis may be one of the important causes of weakened durability of brain tissue in infected individuals and their descendants is extremely probable.

Misdirected sexual activity in youth may therefore become the initial cause of family brain deterioration in subsequent generations. It is of course extremely difficult to demonstrate this statistically, but of the possibility there can be no doubt. Intelligent field work may render possible such demonstration, and disclose at what point family decline began in this or that genealogical tree through the introduction of the syphilitic infection. Every psychiatrist is familiar with individual cases of this character. Such cases may be more numerous than we are aware.

The increasing prevalence of syphilis is receiving deserved recognition in the medical journals of the day. The *Boston Medical and Surgical Journal*, in a timely editorial in the August 31, 1913, issue quotes from a letter in the *London Morning Post* emanating from several eminent medical men condemning the "conspiracy of silence as regards venereal diseases" and recommending the appointment of a Royal Commission "to investigate the facts and to recommend what steps, prophylactic and therapeutic, should be taken to cope with these diseases." The last report of the Massachusetts State Board of Insanity, under the section, "After Effects of Acute Diseases of the Nervous System," makes the following interesting and pertinent statement:

The correlation of Danvers material by Dr. H. I. Paine, of the Danvers staff, had previously shown that the routine of Essex County cases was running over 20 per cent positive sera by the Wassermann test. Of course this percentage was far from showing that all the mental phenomena in these positive cases could be traced to syphilis. Moreover, the Danvers material included general paresis cases in which the relation to syphilis was already clear. It became desirable to learn what amount of residual syphilis could be traced in asylum (*i. e.*, technically, in Massachusetts chronic "transfer") cases. An extensive inquiry gave about 5 per cent positive sera in Worcester Asylum material, to which we had access by courtesy of Dr. H. L. Stick. The more general application of Wassermann tests on admission of our patients is indicated both by the Danvers and Worcester series, but also by the general Boston admissions which at times run as high as 30 per cent positive sera. Important therapeutic work is suggested by these results; for, if the Wassermann positive serum indicates in some sense active syphilis, the condition would seem to demand therapeutic attention for the possible amelioration, if not the cure, of certain mental sequelæ of syphilis.

And again in the same report:

Doubtless the percentage of syphilis demonstrable in asylum material may rarely run over 10 per cent, but the acute material of the active hospitals

may yield a percentage somewhere between 20 and 30 under the present conditions of society. Certain leads in therapy are thereby indicated.

We may conclude that paresis is a dementing psychosis which is exhibiting a marked increase at the present time; that the cause of paresis, syphilis, may be one of the prominent contributory factors in a large number of dementing psychoses that are *apparently* increasing more rapidly than the recoverable psychoses.

While an increase in paresis is demonstrably certain, the same query as applied to dementia præcox presents a problem more difficult of solution. One chief reason for such difficulty lies in the fact that there is not a definite consensus of opinion as to the exact pathology of this disease. Some think that dementia præcox is of psychogenetic origin; others that the psychosis has an organic basis; still others that the name is a misnomer; that the disease is not necessarily limited to the developmental period of life, but is merely a dementing process that may occur in predisposed individuals at almost any age period; and finally there is the supposition of Kraepelin that the disease is of toxic origin. Until there is greater unanimity of opinion as to what is actually meant by the term dementia præcox; until the various theories of alienists shall have crystallized into a more permanent and universally accepted belief, it will be extremely difficult, if not impossible, to say definitely whether this psychosis is really increasing. Numerically dementia præcox has of late occupied an increasingly prominent place in statistical tables. There is fashion in diagnosis as in everything else. We are too near the advent of dementia præcox on the diagnostic horizon to subscribe unreservedly to the correctness of the diagnosis wherever made. The charge has been brought that this diagnosis offers an easy method of disposing of uncertain cases in the diagnostic tables toward the end of the hospital year. However this may all be, there is evidence that greater caution is being exercised in making the diagnosis. Even Kraepelin has receded somewhat from the more positive position held by him when he first described the psychosis. Hospital reports during the next few years will doubtless show a decrease in the number of dementia præcox cases.

The extension of the age limit at which this disease may occur discloses a modification of our original conception concerning it.

Formerly dementia præcox was identified with adolescence. At the present we are not surprised to meet with cases in the third decade presenting the characteristic symptoms of the disease which originally were limited to the periods of puberty and adolescence. Age limit is no longer regarded such an essential factor in the diagnosis. While theoretically retardation and negativism may be pathognomonic of the depressed phase of manic depressive insanity and of dementia præcox respectively, yet practically they are oftentimes so nearly identical and merge into one another so easily that a positive diagnosis of either psychosis cannot be definitely made on these symptoms alone. Automatic negativism, following either a perversion or a paralysis of the will, may occur as readily in a functional melancholia as in a dementing psychosis with a presumable organic basis. In former days the diagnosis of stuporose melancholia with marked negativism did not prevent the psychiatrist from venturing a hopeful prognosis. When dementia præcox became the fashion stuporose melancholia was relegated to the background, and a gloomy prognosis followed. The alienist of former days, his mind intent on a functional disease process, was not surprised at recovery after a year of stupor. During the last decade, however, the hospital physician, dominated by a name and feeling that the symptoms of dementia præcox rested on an organic basis, rendered an unfavorable prognosis. Not infrequently he has been chagrined and surprised to meet with a recovery in what he had supposed was an incurable psychosis. The meaning attached to a name may become an actual obsession; in this way the generic word *dementia* leads frequently to the abandonment of a hopeful prognosis, and the specific title *præcox*, by postulating an age period, prevents the making the diagnosis when it should be made. While the name may be unfortunate, in that it does not always meet all the facts, still the particular disease process which it connotes does exist and the demarcating the pathological symptomatology of *dementia præcox* constitutes one of the most brilliant advances in mental science. It is evident that the diagnosis of dementia præcox should not be made too hastily. Decision should be suspended in doubtful cases sufficiently long to convince the physician that the disease process is something more than a temporary disturbance of brain function. It is

quite probable that when judgment is thus deferred dementia præcox will not appear as frequently in our diagnostic tables during the next ten as it has during the past ten years.

The statistical tables of recent hospital reports disclose marked variation in the preponderance of dementia præcox in different institutions. So great is this variation that one questions the accuracy of the diagnosis, and wonders whether the mood of the diagnostician is not reflected in the result. In some hospitals dementia præcox and manic depressive insanity appear in nearly equal ratio, while in other hospitals the præcox cases are twice as numerous as the manic depressives. Thus:

Hospital.	Year.	Aggregate admitted.	Manic depressive.	Præcox.
Westborough State Hospital, Mass...	1910	491	120	121
Westborough State Hospital, Mass...	1912	494	115	124
Worcester State Hospital, Mass.....	1910	568	72	194
Worcester State Hospital, Mass.....	1912	486	77	145
Danvers State Hospital, Mass.....	1911	573	73	150
Danvers State Hospital, Mass.....	1912	505	92	99
Northampton State Hospital, Mass....	1910	330	56	66
Northampton State Hospital, Mass....	1912	334	57	64
Boston State Hospital, Mass.....	1911	433	78	71
Boston State Hospital, Mass.....	1912	651	108	97
Taunton State Hospital, Mass.....	1911	408	37	106
Taunton State Hospital, Mass.....	1912	520	48	172
Bangor State Hospital, Me.....	1912	183	23	28
Augusta State Hospital, Me.....	1912	270	55	45
New Hampshire State Hospital, N. H.	1911	301	56	42
New Hampshire State Hospital, N. H.	1912	327	65	52

In New York State the per cent distribution of manic depressive insanity and dementia præcox in all hospitals was in

1911 manic depressive, 11.2; dementia præcox, 16.0
1912 manic depressive, 11.5; dementia præcox, 16.0

In the Boston, Augusta, and New Hampshire State hospitals there were fewer præcox cases; in all other hospitals cited the præcox cases exceeded the manic depressive, and in some cases the excess was over 30 per cent. The statistical variations are of such wide range as to render definite interpretation quite impossible.

The very interesting psychogenetic studies of Meyer, Jung, and Bleuler on the one hand, and the proposed anatomical inves-

tigations of Southard should prove most illuminating, and ought to contribute materially to our understanding of this disease. In this connection the following statement by Southard in the last report of the Massachusetts State Board of Insanity is interesting:

Work under way deals further with the dementia præcox problem in the endeavor to settle, from the convolutional standpoint, whether the victims of dementia præcox start with normally developed brains at birth. Publications are in preparation which deal with this work.

In a timely paper by Dr. George H. Kirby, entitled *The Catatonic Syndrome and Its Relation to Manic Depressive Insanity*, published in the *Journal of Nervous and Mental Disease* for November, 1913, the possibility of the occurrence of the catatonic syndrome in functional and recoverable mental disease has been ably and convincingly stated. Dr. Kirby logically draws the following conclusions: "From the point of view of formal symptomatology we find that very similar clinical pictures occur in deteriorating and non-deteriorating cases, and that in all cases the most reliable prognostic data are gained from a study of the personality and the mode of development of the psychoses." And again: "There can be little doubt that Kraepelin over-valued catatonic manifestations as evidence of a deteriorating psychosis, and that many of these cases have served to swell unduly the dementia præcox group." Dr. Kirby cites a number of cases in which stupor, catatonia, and negativism were prominent symptoms for long periods of time and eventually recovered, "in some instances after a duration of several years."

Whether there has been an actual increase among the dementing psychoses of early and middle life is very uncertain. Statistics imply such increase. The conclusion is not necessarily proven. The fact that cases can be so readily transferred from the non-deteriorating to the deteriorating column, according to the view point of the diagnostician, invalidates any opinion drawn from statistics. An actual increase of true dementia præcox throughout the country would mean a condition of serious import. True dementia præcox undoubtedly represents a weakening of the family stock. As such it may depend upon a variety of causes: alcoholism, constitutional diseases of various sorts in the antecedents, anything, in fact, that lowers the resisting power

of the nervous system. Dementia præcox is not consistent with a strong, virile family or racial stock. The writer inclines to the more hopeful conclusion that the larger statistical increase in dementia præcox is due rather to a change in the view point of the diagnostician than to any large numerical increase in the disease itself. Such conclusion should stimulate the psychiatrist to a more careful and hopeful study of all apparently dementing psychoses occurring in early life. Such dementing processes in adult periods are more serious and suggest impaired durability of brain tissue. That there is any real increase in this psychosis over what might be expected from the natural increase in population is doubtful.

There is one fertile recruiting ground for dementia præcox demanding most thoughtful consideration, the ignoring of which may lead to disastrous results. Young immigrants, with poor hereditary and environmental antecedents, easily become victims to this psychosis. The adolescent recently arrived from southeastern Europe, without education, with possibly an hereditary handicap, suddenly finds himself in a strange land, confronted with new customs, different food, and compelled to get a living out of unfamiliar and to him anomalous conditions. Most likely he is placed in an unsanitary city environment. His already weak mind readily succumbs under the strain. From the ranks of the predisposed immigrants will in all probability come a large increment of dementia præcox. In years past the Irish immigrants have furnished the most noticeable recruiting ground for this psychosis. Their place has been taken by the French Canadian and the races of southeastern Europe. Prophylaxis should demand more rigid mental inspection of immigrants, preferably at their ports of embarkation. A large increase in dementia præcox during the next few years will in all probability proceed from imported stock. The strong and mentally well-endowed immigrant, even though he be uneducated, is welcomed and assimilated. The weaklings should be rigidly excluded, preferably before they leave their native land.

Whether the dementing psychoses are increasing in the fourth, fifth and sixth decades is largely problematical. Judging from statistical tables, diagnostic methods seem to be undergoing a transition. Involutional melancholia, presenile insanity, Alz-

heimer's disease, and senile insanity are terms that seem to connote varied phases of dementia occurring at any time after the beginning of the fourth decade. Cases may occur during this age period presenting manic depressive symptoms that do recover. The majority of these cases, it must be admitted, do not recover and the query arises whether the pathological etiology is not the same in all. An apparent increase in these dementias follows from the fact that persons becoming demented after fifty years of age are very apt to become permanent residents of institutions, and relatives are much more willing to commit family members who become incapacitated at this age than formerly. A somewhat changed point of view has led to the placing of a larger number of cases occurring in the fourth, fifth, and sixth decades in the column of the dementing psychoses. All these factors contribute toward an apparent increase among the dementing psychoses occurring after forty years of age. It is doubtful whether fundamental conditions have changed. Probably the increase is more apparent than real, due to different pathological interpretation and diminished popular prejudice against institutional treatment.

In this connection it is interesting to note that arteriosclerosis is given a less prominent part than formerly as a causative factor in the insanities of advancing years. Reduction in arterial caliber and consequent diminished brain cell nutrition are an easy explanation of senility and senile dementia. Recent studies, however, do not support this contention. Dr. Southard and Dr. Mitchell, in the *American Journal of Insanity*, Vol. 65, October number, conclude that while arteriosclerosis may frequently accompany the insanities of the sixth and seventh decades, still "neither general nor cerebral arteriosclerosis bears an essentially causative relation" to mental attacks in these decades. Is it not more probable that all these insanities occurring in late middle life and old age are but the expression of tissue aging, of failing durability of cerebral cell structure, dependent on fundamental or inherited constitutional limitations?

In a series of able articles in the *Journal of Mental Science*, Vols. 51, 52, 53, 54, Joseph Shaw Bolton presents a broad inclusive picture of all the dementing psychoses, attempting to bring them all under two groups, Amentia and Dementia. The attempt

is made to trace back all the dementing psychoses, both congenital and acquired, to a definite physical basis; in other words, to simplify the nomenclature of mental diseases and unify the disease process by establishing a common pathological background for a widely divergent symptomatology. The proposition is commendable and appeals to a logical mind.

Briefly stated, Dr. Shaw's theory is that all epochal and degenerative insanity has an organic basis. He employs "the term 'dementia' to connote in the widest sense the mental condition of patients who suffer from a permanent psychic disability due to neuronc degeneration following insufficient durability." By amentia he means those cases "suffering from deficient or sub-normally aberrant neuronc development." According to this theory all human beings at birth come under one of two classes: I. Those who are well endowed and have normal resistance; and, II. Those who possess deficient durability of nerve tissue, or an actual defect—an incapacity in nerve structure to develop normally. In either case there is a pathological handicap which sooner or later results in more or less permanent mental instability. As Dr. White so well expresses it: "Every individual born into the world has, if it could be determined, a definite potentiality for development." The durability of a man's nervous system is somewhat analogous to the tensile strength of iron. Just as the tensile strength of a steel plate varies with the molecular resistance of that particular plate, so each man's nervous system has its own durability beyond which it cannot be pressed without danger of disorganization.

It is quite probable that the same histological and pathological processes underlie every form of tissue aging. Dr. Albert M. Barrett, in the 1913 June number of the *Journal of Nervous and Mental Disease*, reports an interesting case of Alzheimer's Disease occurring at an unusually early age. In this case the disease began at 33 years of age, and the patient died at 37. Dr. Barrett calls attention to the histological similarity between Alzheimer's Disease, usually considered a disease of the presenile period, and the brain changes in senile dementia, and raises the interesting query whether the limits of presenility may be extended forward to include this case as well as onward to the truly senile cases.

In the following language Dr. Barrett suggests histological and pathological identity underlying all these cases :

The circumstance that there seems to be no difference in the character of the plaques and neurofibril alterations between these presenile and the truly senile cases, excepting in the intensity of the process, and that there also occur in each similar changes in the neuroglia of the marginal layer, and the accumulation of lipoid substances in the nerve cells, glia cells and blood vessels has led to the explanation that these early cases are prematurely senile, and that senility is not essentially a matter of years but of tissue aging. It has become difficult to limit disease processes by age periods, and Alzheimer comments that anatomical investigation has taught us that progressive paralysis may occur as late as the 70th year and the pathological process of senility as early as the 40th year.

Speculation at the present time as to a probable increase in feeble-mindedness is futile because accurate tabulation of this condition is very recent. In some states careful registration and study of imbecility have only begun. Comparatively a few years ago the feeble-minded were ignored. They either roamed at will in their native communities, or when too great a nuisance were housed, not always permanently, at the town or county almshouses. Within only a few years has segregation of these defectives been seriously advocated. An apparently large statistical increase may occur because feeble-mindedness is better understood than formerly. The higher grades of imbecility were formerly ignored, but are now recognized and classified. In fact, the high grade imbecile is now regarded a far greater menace than the lower grades, for, with his larger intelligence, he moves about more freely in the community and propagates a numerous feeble-minded legitimate or illegitimate progeny. Statistical increase is therefore misleading.

There are some valid reasons for inferring an actual increase. Present-day social conditions are widely different from those of fifty years ago. At that time feeble-mindedness seemed more sporadic than now. Formerly imbecility was more restricted in its distribution and was confined within circumscribed localities in the state. Apparently there were centers of prevalence. The advent of easy transportation facilities by the extension of steam and electric roads has made possible a freer movement of all classes of the population. Isolated rural districts are more readily reached than formerly. The high grade imbecile finds little diffi-

culty in changing his habitat, and presumably does not remain as permanent a resident as formerly in the native home locality. It must be admitted that social conditions favor a readier movement of these defectives from place to place and consequent propagation of their kind. The comparatively recent attempt at stricter segregation of all grades of imbecility, if persevered in, must eventually reduce any increase following freer movements of population, and should ultimately bring about an actual decrease among these defectives. Intelligent curtailment at the source must diminish their numbers. Statistical proof will not be available for a few years at least.

In conclusion, the writer feels that while it is demonstrably certain that paresis has increased during the last twenty-five years, it is by no means equally certain that an actual increase in the other dementing psychoses has occurred. Fundamental conditions are much the same now as they were fifty years ago. With the exception of parasyphilitic brain conditions the actual disparity between the functional diseases of the mind and the dementing psychoses is probably not much greater now than formerly, making due allowance for increase in population. Certain prophylactic endeavor is suggested by this cursory survey. Curtailment of the immigration of mental defectives at the source, restriction of alcoholic indulgence, prevention of syphilitic infection, stricter segregation of the feeble-minded, greater intelligence in entering upon the marriage relation, are some of the steps by which a decrease among the dementing psychoses may be attained.