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THE MUTUAL RELATIONS OF THE ALIENIST AND NEUROLOGIST IN THE STUDY OF PSY- CHIATRY AND NEUROLOGY.¹

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When I first received the invitation to deliver the annual address before your Association, I promptly declined, because I felt unequal to the task. On reconsidering the matter, however, I concluded to accept and try to do my best, realizing that nothing more than this would be expected of me, and that in my failure, as I certainly must fail to maintain the high standard reached by some of my predecessors in their annual addresses, I should not seem unmindful of the honor that you have conferred upon me. I desire to thank you for this evidence of your esteem, and to assure you that I feel a keen appreciation of it.

I have selected for the title of my paper, "The mutual relations of the alienist and neurologist in the study of psychiatry and neurology." I may be accused of airing a hackneyed subject that has been worn threadbare by frequent discussions, but if I succeed in presenting it in a new light, and in making some practical suggestions for your consideration, my object in serving you will have been accomplished.

¹ Annual address before the Medico-Psychological Association at St. Louis, May 11, 1898.

This One

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I wish to remind you here that what I may have to say in reference to psychiatry and the management of hospitals, for the alienated, will relate mainly to the scientific side of these subjects. I am not unmindful of the fact that directly the practical management of a hospital, at least to the patients, is of greater moment than the scientific. It is well recognized, however, that the more carefully and scientifically physicians study the cases of their patients, the more attention they pay to intelligent treatment. There is less of the empiric in the management of cases by such men. That principle which holds good in the treatment of individual cases applies with equal force in the practical management of hospital cases. I have caught myself time and again almost unconsciously paying extra attention to the treatment of patients whose cases had been the subjects of some of my clinical lectures. This observation has been made by my patients, as well as by myself, so that those who had been exhibited in the clinic room became the objects of jealousy by the less fortunate. I have no doubt but that every clinical teacher of medicine here to-day has had similar experiences.

If, then, the best scientifically conducted hospitals are the ones in which the patients receive the greatest practical attention, no further apology on my part is needed for limiting my remarks to the scientific aspects of the subjects which I may consider.

Heretofore psychiatry and neurology have been commonly regarded as two specialties, not, however, as distinct from each other, but bearing a certain relation one to the other. I shall endeavor to show that they are, when scientifically considered, so intimately related to each other that they are one and the same. The alienist can no more intelligently pursue the study of psychiatry without a comprehensive knowledge of neurology than the neurologist can become thoroughly an expert in neurology without having a well grounded knowledge of the diseases of the mind and their treatment.

Let us first consider the necessary accomplishments of the alienist. The broadest and best specialists in any department of medicine are those who have a good theoretical and practical knowledge of general medicine. The alienist is no exception to this rule. He must not only have a general knowledge of medicine, but, in addition, he must be a person of extensive read-

ing, with powers of accurate and close observation, and given to studious and thoughtful habits.

Insanity is not a disease. It is a symptom of perverted function, or of disease of the brain that impairs or destroys mental integrity. It follows, then, that the expert alienist—and all alienists ought to be experts—should be both theoretically and practically familiar with those perverted functions and organic lesions of the brain that give rise to insanity. The alienist should know something of everything in medicine, and everything, as nearly as possible, of psychiatry and neurology. In general medicine, he must be sufficiently versed to be able to reason from cause to effect. It may be that through some systemic disturbance the blood has become impoverished or poisoned, and as a result of the vitiated blood state the functions of the brain have been perverted. On the other hand, an emotional or mental shock or prolonged worry may so disturb the workings of the organs of organic life as greatly to retard or pervert the metabolic processes, and these conditions may, in their turn, still further derange the action of the brain. Some diseases or perverted functions of the brain will give rise to insanity, while others will not. Insanity is always the direct result of disturbed brain function. This conclusion may seem trite. I merely refer to it to show that neurology, which deals so largely with the diseases of the brain, and psychiatry, which is limited almost exclusively to diseases of the brain, are scientifically one and the same special department of medicine.

Since the study and treatment of insanity are so intimately blended with the study and treatment of the diseases of the nervous system, it follows that an expert alienist must of necessity be an expert neurologist. He must possess an intimate knowledge of the gross and microscopic anatomy of the entire nervous system. He must know the functions of the different portions of the brain, spinal cord and nerves, and of the ganglia of the nervous system. He must know the results of perverted function of the various parts of the nervous apparatus. He must be familiar with the numerous organic lesions of nervous structure, and be able to interpret their effect, whether mental or physical. Hence there is no line of demarcation between the knowledge of structure, function and the diseases of the nervous

system that should be possessed by the alienist and that which should be familiar to the neurologist.

It follows, then, that the manner of investigating and studying cases of persons mentally sick, in general terms, is the same as that required in a case of obscure nervous disease, and for each the investigation should be equally thorough. A detailed history of the patient previous to admission into a hospital for the alienated should be obtained when possible. The meagerness of this part of the history is rarely the fault of the medical official of the hospital to which the patient is sent. It is not always possible to obtain the desired information, and when it is obtainable it is rarely forwarded to the institution in which the patient is to reside. This fault is due to the neglect of the physician, who is often a neurologist, under whose care the patient had been prior to the transference to a hospital for mental diseases. The history, when complete, should contain particulars in reference to the habits, temperament, moral and physical weaknesses and diseases in the remote and near relatives of the patient, together with a full account of the patient's health and habits from birth up to the time of the beginning of the mental sickness. Then should follow a clear but brief description of the manner in which the mental infirmity began, developed and progressed. If any cause for the mental aberration is given, all known facts should be stated, so that the alienist, on account of his greater experience with mental diseases, may be able to draw his own, and probably better, conclusions. Appended to the history should be found a record of the various examinations into the mental and physical condition of the patient. These examinations should consist of careful inquiries into the condition of every organ of the body, the state of those functions, the condition of which can be ascertained during life, together with accurate records giving information concerning the reflexes, the motor phenomena, the sensory, when they can be ascertained, the special senses, the actions of the patient, his speech, hallucinations, illusions and delusions, when these exist.

Were such detailed histories, with records of examinations, as the one here indicated, to accompany all patients admitted into hospitals for mental diseases, the alienists would soon be in possession of a mass of facts that would aid in clearing up many

mooted points in relation to the causes and prevention of insanity. The neurologist in particular, and the general practitioner of medicine in general, are often given to fault-finding because psychiatry seems to advance so slowly among hospital physicians whose opportunities are so great for the study and treatment of the diseases of the mind. We apparently forget that the beginning of the study of psychiatry must commence without the walls of hospitals devoted to the care and treatment of the insane. I do not wish to commend a single member of this association for anything that he does not deserve, nor do I wish to be understood as implying that you have all done your duty in trying to advance the science of psychiatry. I do wish, however, to emphasize the statement that to the carelessness and indifference of the neurologists and of the general practitioners of medicine in the study of insanity and in the treatment of the insane, may be attributed much of the tardiness in the progress of psychiatry. It is requiring too much of human nature to expect hospital physicians to feel the same interest in the scientific study of cases of insanity, the previous history and physical and mental conditions of which are unknown to them, as in those the entire records of which lie before them as an open book. In Colorado, among the pauper insane, it is impossible for the physician to obtain a reliable history in regard to relatives and previous states of health of the patients in more than one-half of the cases.

We will suppose that the patient has been transferred to the hospital either with or without a history and a record of examinations. What are the duties of the chief medical officer, who should be an expert alienist? What I have to say in this connection must relate to the workings of such hospitals for the insane as are well supplied with skilled assistant physicians and trained nurses, and have sufficient money, first, to make the patients as comfortable as possible, and secondly, to carry on continuous scientific investigations. In those institutions to which a meager appropriation of money is doled out, year by year by indifferent legislators, the struggle to feed and clothe the inmates must go on, and the chief medical officer must content himself to do the best that he can single-handed, although he may have 400 or 500 patients to look after, as is the case in the Colorado State Insane Asylum. In this institution there are 432 patients, no

assistant physicians and only 11 attendants for both day and night duty, with insufficient appropriations to feed and clothe the inmates, even after utilizing the farm products raised largely by the labor of trusty patients. This state of affairs remains in the face of the fact that the ninth biennial report, made in December, 1896, showed that the patients in this hospital were cared for with less expense *per capita* to the State than those of any other hospital of the kind in the United States. We certainly have no right to expect much scientific work in a hospital so poorly equipped, yet I shall be able to show you that our physician in charge, although most of the executive work of the entire institution devolves upon him, is making improvements from time to time and is preparing for rapid advancement in scientific work as soon as the appropriations shall enable the board of commissioners to employ the necessary assistant physicians and other skilled help.

I will now speak of the scientific work that we have a right to expect of the presiding medical officer in a hospital for the treatment of mental diseases—that is, in an institution in which he has skilled assistant physicians and other necessary trained help, together with a carefully selected, but not necessarily a large, medical library.

We will suppose that the family and personal history of the patient, with record of examinations, have been sent to the hospital with the patient. These should be carefully transcribed into a book kept for that purpose. Then should follow any other facts in the history that the physician may be able to elicit from the patient or his friends. In this connection, a careful inquiry should be made in relation to heredity and sanguinity, noting besides the degree of simple blood relationship, the consanguinity or exsanguinity of the parents.

All hospitals of the kind under consideration should have a receiving department, into a room or ward of which a patient on entering the hospital should be placed until the case is properly studied and classified. As soon after admission as possible, a thorough and systematic examination of the patient's physical and mental condition should be made. The blood, urine and sputum should be carefully examined in every case. The nutrition of the patient should be noted. The state of digestion and

the condition of the thoracic and abdominal organs should be ascertained as nearly as possible. The nervous system should receive very careful attention. The gait, the presence or absence of ataxia, tremor, muscular weakness, the reflexes, deep and superficial, the electrical reactions of the muscles, speech and the sensory phenomena, both general and special, should be investigated and the results noted. In many cases of mental disease it is impossible to determine accurately the condition of the sensory phenomena, so that it has become too common to neglect them entirely in this class of cases. Any one who has given this subject much attention will agree with me that in many cases of mental disease, it is not difficult to make a fair test of the sensory phenomena, with very satisfactory, and sometimes interesting, results. Under the head of the general sensory phenomena, tactile, temperature, pain, muscular, posture, pressure and joint sensations may be classed. A careful ophthalmoscopic examination of the eyes should be made and recorded in every case. Any head pain or discomfort in any other portion of the body should be inquired for, together with various subjective sensory disturbances, and the conditions noted. The mental symptoms should receive more than a passing notice. It is not sufficient to state that such delusions, illusions or hallucinations of such a character are present, either with or without evidence of dementia, and that the patient is exalted or depressed. The more tangible symptoms of mental aberration, such as delusions, illusions and hallucinations should be looked for and noted when present, but the examiner should not stop here. Much valuable information regarding the mentality of the patient can be gained by a careful analysis of a delusion. Is the delusion systematized or unsystematized? Is there an attempt at systematizing, but a failure to sustain it in long explanations? To what does a delusion relate? How does it affect the mentality of the patient in regard to his reasoning power and in relation to his personality or ego? Does the patient readily reveal his delusion, or does he attempt to hide it? Does he recognize his delusion as such, but confesses his inability to prevent it from influencing his actions? Is it fixed or changeable? Does the delusion involve one or more sensory tracts? Is the delusion primary or secondary? Is it persecutory in nature? Does it relate to depression

or exaltation? Is it grandiose in character? These and many other inquiries concerning a delusion may be made and noted. You are all familiar with them and well know their importance. I am not so conceited as to think that I can teach the youngest member of this Association anything in regard to the study and investigation of mental diseases, but I am endeavoring to show how much valuable information we all would be the possessors of if every symptom of each case of mental disease were carefully recorded.

Our chief medical officer, who is surrounded by all the facilities necessary to enable him to conduct a hospital for the study and treatment of cases of mental diseases, should not content himself with recording the condition of the emotions by saying, "the patient is depressed or excited." Some patients suffer from intense mental depression, yet they may be, and often are, the most noisy ones in a hospital. Some are in a state of mental exaltation, yet they are quiet, happy and good-natured. Some are easily moved to tears or laughter. Some manifest their emotional states in a reverse manner to what we find in health; they shed tears on joyful occasions and laugh and appear merry in the presence of the dead. Some are irritable, morose, suspicious and seclusive; while others are happy, good-natured and frank. The mentally sick are influenced to a greater degree by the emotions than we find to be the case with patients in a general hospital, therefore, the emotions should receive greater attention in the study of the former than is necessary in the latter.

The further examination of the mental condition of the patient should include a careful analysis of the moral sense. A study of the moral sense of the eccentric and alienated has interested me for a great number of years. The general practitioner of medicine and the neurologist might greatly aid the alienist in the investigation of the moral sense of his patients by including in the family history, to be sent with the patient, the character and degree of the moral perversion in various members of the family, and by noting whether the moral tone of the family had improved or deteriorated from generation to generation, and its relation to sex and consanguinity. Some are moral imbeciles from birth, while others become moral imbeciles from the results of disease, from the abuse of certain drugs or alcohol or from

injuries to the head. Some are devoid of all moral sense; some seem to have no moral sense in sexual relations; others are natural liars; and in not a few there is no sense of honesty. Occasionally we meet with the moral crank who seems hypersensitive in regard to his moral conduct and lives in mortal dread of doing wrong. It is not rare for these to be lax morally in some particular direction. They not infrequently lose their reason under some trying ordeal. The sexual pervert needs to be studied and classified. Not infrequently a good citizen, whose reputation for probity and honor has always been untarnished, suddenly, on the slightest suggestion, apparently without the slightest cause of provocation, loses self-control and takes his own life or that of another, or commits some other desperate act for which he is unable to account. The explosive violence is to him what the nerve storm is to the epileptic; it is beyond his control. Surely a careful inquiry into all these cases and a noting down of every modifying circumstance would in time throw a flood of light on the causes and the pathological influences that underlie them.

In examining into and recording the condition of the higher cerebral faculties in many of the alienated, much valuable information, beyond the usual, may be obtained, if the inquiry and analysis are thorough. Does a condition of amnesia exist? Is it complete? Does it relate to remote or recent events? For what class of objects or for what parts of speech is memory most affected? Is there a period in the patient's life during which memory is a blank? Does it relate to head injury or to some illness? Is it retrograde, anterograde or retro-antegrade in character? In ordinary cases of amnesia, the memory for recent events is lost first, while that for remote ones remains fresh, and the recollection of events long past takes place more readily than in health. In a few exceptional cases this order of the loss of memory has been reversed.

In testing the power of reasoning, does the patient realize that his premise is wrong, or does he think or know that it is right? Granting him his premise, does he reason logically or are there flaws in his process of ratiocination? In what direction and for what subjects is his reason most affected?

After a patient's case has been carefully studied and classified,

he should be transferred to his room and allowed to mingle with other patients to observe the effect of association and imitation upon his psychosis.

It may be asked how often is it necessary for scientific purposes to re-examine a case of mental disease? No rule can be given in answer to this question. Every case must be a law unto itself. I have seen in the rules made by some State Boards of Charities for the government of hospitals for mental diseases, the requirement that every patient should be examined and his case recorded as soon after admission to the hospital as possible, and a re-examination made every few months. It must be evident to every scientific investigator that such work, at the best, is perfunctory and devoid of much value either to the patients or to science. All scientific observation and investigation, to amount to much, must be the work of love, else it loses its freshness and crispness, and the task (for all perfunctory work is a mere task) is performed without zest. From the rules to which reference has just been made, it would seem that some regard the manner in which mental cases should be observed and studied to be different from that which has been found best in investigating cases of disease in general. The fact is, that the physician who keeps a close watch of his cases, general or special, after he has made an exhaustive examination, and notes in writing changes as they occur from time to time, will not find it necessary in the majority of instances, to make repeated systematic re-examinations. The manner and frequency of examining patients cannot be intelligently dictated by boards of control, but must be left to the judgment of the physician in charge of the hospital. The condition of certain organs and the state of certain fluids should be re-investigated at stated intervals. The urine, the blood and the sputum should be repeatedly examined, also the condition of the organs, the heart, the lungs and the eyes. What folly and waste of time it would be to make repeated and systematic re-examinations of a case of simple dementia unless a change of symptoms warranted it. On the other hand, much valuable information might be obtained in regard to the course of parietic dementia if cases were repeatedly and carefully studied. The same may be said of many acute mental disorders. Much has been gained in psychology by studying the processes of mental evolution, but much more valuable information could be

added to this department of science by a thorough and painstaking investigation of the processes of mental involution and decay. Take, for instance, a case of senile dementia. How beautifully the giving away of link after link in the mental organization reveals the manner in which the mentality of the patient was built up. First the memory fails, but for only recent acquisitions, and these in the beginning relate to acts, parts of speech, names and subjects that are known to be the least stable acquisitions of the higher cerebral cortex. Later, judgment and reason begin to wane and memory for all recent events is weakened, then lost. Finally one portion after another of the great mental structure gives way, and always, other things being equal, in the reverse order of its acquisition and its stability until the man becomes a child, and finally an animal.

I need not spend much time in describing to you how thoroughly our model physician in his model hospital for cases of mental diseases should have conducted the post mortem examinations, not only of the brain, but of every part of the nervous system, and of every organ of the body. These are so absolutely necessary that nothing that I can say will add importance to the subject. How refreshing and edifying it is to observe all the pathologic changes in a case, after having conscientiously and thoroughly studied it daily for months or years, and having noted the course of the disease and watched its modifications by certain complications.

I fear that not all the hospitals for the insane that have established pathologic laboratories, have resident pathologists, whose sole time is given up to the work of the laboratories, but it is gratifying to find that the necessity for such departments and special workers, is being recognized.³ The time is not far distant

³ In January of this year I wrote to my friend, Dr. W. O. Krohn, Psychologist to the Illinois Eastern Hospital for the Insane, Hospital, Illinois, requesting a list of all the hospitals for the insane in the United States which had established pathological laboratories and the names of the pathologists, and received the following reply:

"In response to your recent inquiry permit me to say: I have no official list of pathological laboratories established in connection with hospitals for the insane, but from personal knowledge I know that the following institutions have such a feature and make necropsies of most of the cases as we do here:

"McLean Hospital, Waverley, Mass., Dr. Aug. Hoch, Pathologist;

when pathologic and psychologic departments, with skilled directors, will be established in connection with every hospital for the insane. Although in New York, a central laboratory is located in New York City, most, if not all, the hospitals for the insane in that State have established laboratories in connection with the hospitals, and the able corps of workers in this line of research is a credit to psychiatry in any country. The excellent report issued by the Illinois Eastern Hospital for the Insane received most favorable notices at the hands of scientific investigators.

We have nothing but words of praise for the able pathologists who are devoting themselves to investigating the pathology of insanity, and in most instances too, without sufficient remuneration. Let us do all that we can to encourage these faithful and often too little appreciated workers by insisting on the absolute necessity of this line of investigation in the study of mental diseases, and also by endeavoring to see that they are properly paid.

We will now turn to the neurologist. If I mistake not I think most, if not all, of you will agree with me that an expert alienist must be an expert neurologist. What then should be the accomplishments of the neurologist, especially in regard to a thorough knowledge of psychiatry? In the first place, with the present management, it is the neurologist rather than the hospital alienist, who has an opportunity to study and treat mental diseases in

State Hospital for the Insane, Danvers, Mass., Dr. W. L. Worcester, Pathologist; State Hospital for the Insane, Worcester, Mass., Dr. Adolph Meyer, Pathologist; State Hospital for the Insane, Milledgeville, Ga.; State Hospital for the Insane, Tuscaloosa, Ala.; State Hospital for the Insane, Mendota, Wis.; Eastern Illinois Hospital for the Insane, Hospital, Ill.; Eastern Michigan Asylum, Pontiac, Mich.; State Hospital for the Insane, Indianapolis, Ind.; State Hospital for the Insane, Independence, Ia.; State Hospital for the Insane, Clarinda, Ia.; City Hospital for the Insane, St. Louis, Mo., Dr. E. C. Runge, Pathologist; State Pathological Institute, New York City, Dr. Ira Van Gieson, Pathologist; State Hospital at Norristown, Pa.

"Dr. Sidis, in New York City, has established very recently a psychological laboratory something like mine here.

Yours truly,

W. O. KROHN."

I wish to add that Dr. Tomlinson, of St. Peter's Hospital for the Insane, is doing excellent pathological work.

their incipient stages. It is early rather than later that the most good can be done in the way of treatment. It is in the early stages of dementia and paretic dementia that fortunes may be saved to the families and friends of the sick by legal steps to prevent the paretic from squandering his money or the senile dement from becoming the dupe of an unprincipled adventurer. The detection of feigned mental diseases, and the diagnosis of obscure cases of mental aberration in persons who have committed crime, require the most thorough theoretical and practical knowledge of the diseases of the mind. For these purposes, the aid of the neurologist is sought far more frequently than that of the alienist in charge of some hospital for mental diseases. The successful management of cases of nervous diseases, both functional and organic, but more especially the former, requires an intimate knowledge of mind. It is in these cases especially, that the truth of the old axiom, "treat the patient rather than the disease," is best illustrated. The successful practical neurologist, besides having personal magnetism, must know how to inspire the confidence of his patient in himself. He must know, in cases that justify it, how to fill the patient with the idea that he is going to improve and get well. The physician who can influence his patient's mind by suggestion, without obtruding the fact upon him, will have greater success in treating functional nervous disorders by means of placeboes than he who simply depends upon the application of drugs for relief of the afflicted. The proper management of hysterical cases requires a most thorough practical knowledge of mind.

Since the work of the neurologist demands that he shall be familiar with practical psychologic subjects, with psychiatry and neurology, let us see whether neurologists have made themselves experts in all these subjects, before we find fault with the alienists in charge of our hospitals for mental diseases with neglecting to advance the science of psychiatry as rapidly as they ought to do and might do.

The eminent neurologist who so ably addressed you at your last annual meeting in Baltimore, referred, in all seriousness, to the speaking acquaintance which the neurologist has with the subject of psychiatry. It is true that the charm which the study of mental diseases has for many, often leads them to study the

diseases of the nervous system. But I fear that many of us, who are willing to be called neurologists, have little more intimate knowledge of psychiatry than "a speaking acquaintance with it." Our knowledge of the subject should be as familiar as the names and faces of old friends. How few neurologists take the same trouble in investigating cases of mental diseases as they are wont to do in studying those of a nervous character? A number of neurologists during the first few years of study of the nervous system and its diseases carefully investigate most of the cases of mental diseases that come under their care. In the early career of the neurologist, he reports his interesting cases of mental diseases as well as those of a nervous character. If he has had a thorough training in psychiatry before he devotes himself almost exclusively to the diseases of the nervous system, this early training enables him to become a broad-minded student of neurology. There are, however, weighty reasons why the neurologist should keep himself practically familiar with the different forms of mental diseases. In the first place, the early management of most cases of mental diseases, especially in thickly settled communities, depends upon the neurologist. If he does not keep himself abreast of psychiatry and practically interested in the welfare of the alienated, he will not study and manage a case of mental disease with as much enthusiasm and intelligence as he should. In the second place, the alienists in charge of our hospitals for mental diseases must depend upon his co-operation and help for accurate family and personal histories of most persons committed to their care. By fulfilling his obligations to the alienist in this direction he greatly aids in the advancement of psychiatry. A third and last reason that I shall mention here, why the neurologist should continue to be a practical alienist is, that it is his duty to keep in close contact with the physicians in charge of our hospitals for mental diseases, because the energy and enthusiasm exhibited by earnest workers in scientific departments so nearly alike that there can be no line of demarcation between them, cannot fail to bring the alienist and neurologist into closer sympathy and stimulate each to greater devotion in devising means for the relief of their patients and the advancement of psycho-neurology.

What are some of the causes that prevent neurologists from becoming more eminent in psychiatry? Too little attention is

paid to mental diseases in all of our medical colleges. The defect is found in the large as well as in the small schools of medicine and relates to both didactic and clinical instruction. In many of our medical colleges that rank well, not a didactic lecture is given on diseases of the mind. The time given to clinical instruction in mental diseases is too short and the clinical lectures are often of such a character as to fail to impress the student with the great importance of the subject. I regret to acknowledge it, but in many of our medical schools almost nothing is taught in regard to the pathology of insanity. In the next place, it seems to me that the early training of the neurologist is often too narrow. Neurology is the broadest of all the specialties, and a thorough preparation for its practice demands a practical familiarity with all other departments of medicine. Most men before they devote themselves more or less exclusively to the subject of neurology, have been for a number of years general practitioners of medicine, but in the study of the most essential branch of medicine to them—psychiatry—they are usually woefully ignorant on the commencement of their career in neurology. Another reason for the neurologist's failing to become eminent in psychiatry is the want of opportunity to study cases of mental diseases properly. Every well regulated general hospital should have a department for the care and treatment of cases of acute mental diseases. An additional reason is, that the managers of hospitals for the alienated have not appointed a number of visiting neurologists to each hospital. Of course, from the location of many of these special hospitals it would be impossible to have a number of neurologists visiting them at frequent intervals, but there are few of these hospitals so inaccessible that an occasional visit from an outside neurologist might not be accomplished.

REQUIREMENTS OF A HOSPITAL FOR THE STUDY OF SCIENTIFIC NEUROLOGY.

The requirements of a hospital for the scientific study of psycho-neurology and what such an institution might, and probably would, accomplish under the guidance of a wise and eminent alienist will now be outlined.

If you will excuse the repetition, I will repeat that I do not wish to be understood as ignoring the great importance of the

practical care and treatment of persons afflicted with mental diseases. I fully recognize that the scientific study of psychiatry is secondary in practical importance to the care and treatment of those that are mentally sick. I do believe, however, and I apprehend that I shall not meet with many who hold to a contrary opinion, that the hospital, be it general or special, that affords her patients the best scientific study of their diseases, will also give the most humane and skilled care and treatment.

As I remarked at the beginning of this address, I shall limit myself almost exclusively to the scientific aspect of psychiatry. What I may say in regard to the practical workings of a hospital for the alienated will be merely incidental.

When practicable the hospital should be located within easy access to a large city. The plant of such a hospital, when supplied with all necessary arrangements for the scientific study of psychiatry, is expensive, and if its situation is the best that can be possibly obtained and the buildings properly constructed, it may be built to accommodate as many patients as may be desired without fear of detriment to the best interests of the inmates. The administration building should be sufficiently large for the purposes for which it is designed, and connected with it should be sleeping apartments for the officers, resident physicians, nearly all the help, including apartments for the trained nurses, so that all the employees could be kept under the eye of the general supervisor. The architecture of such a building, we may leave to individual tastes; it does not concern us here.

A special hospital and operating room. Connected with every large hospital devoted to the treatment of mental diseases, should be a small hospital for the treatment of surgical cases, and for the care and treatment of the insane who may develop acute physical diseases, such as pneumonia, typhoid fever, etc. A prominent feature of such a hospital should be a well equipped surgical operating room. But few of the large hospitals for the alienated are so arranged that those suffering from severe bodily sicknesses can receive the proper care and attention. The surgical treatment of the insane is often neglected because the necessary facilities are not at hand for the proper aseptic management of cases of surgery of the brain.

The grounds should be ample and a large farm should be

attached. The buildings for the patients should vary in size from one containing a few rooms to one in which 50 or 100 persons may be comfortably accommodated. The larger buildings should be for the indigent sick and the smaller ones for those who are able to pay for their care.

Medical Director. The chief officer should be a physician, and I can think of no better title for him than *Medical Director*. He should be a man of energy and approved executive ability. He should be a person of broad intellectual culture, an alienist of undoubted reputation, and practically conversant with all the means known for psychologic and psychiatric research. He should receive his appointment at the hands of the Board of Directors, which should be composed of the most enlightened physicians of the State. His term of office should be for life, unless cause for his removal should arise. His duties should be, to keep himself familiar with the conditions and needs of all the inmates; to inspect all the histories and records of examinations of the patients; to keep supervision over the assistant and resident physicians, the psychologist and the pathologist to see that they properly perform their work; to counsel with the assistant physicians when his services are required in any special case; to aid in instructing the resident physicians; to assign to each physician his duties; to conduct or preside over the regular scientific discussions of the medical officers of the hospital; to keep a general supervision over the officers of the executive side of the hospital; and to act as arbiter, in the absence of the Board of Control, in all cases in which such action is needed. There may be a difference of opinion in regard to the place of the residence of the medical director and to the propriety of his being permitted to do any private practice. Personally, it seems to me that he will be fresher for his work and better fitted for it in every way if he lives outside the hospital grounds, comes in contact with physicians and devotes a few hours each day to office and consultation work. His hospital experience and duties preeminently fit him for a consultant in mental and nervous diseases, if he is not kept constantly within the enclosure of the hospital.

Assistant Physician. There should be one assistant physician

for every 50 patients.* He should be selected by the Board of Control, which is composed of physicians, solely on account of his fitness for the position, and when possible, he should be chosen from among the resident physicians of the hospital. His tenure of office should be for life, unless removed for cause. His duties should be to examine, with the resident physicians under him, each patient on admission to the hospital, revise the history, make the provisional diagnosis, submit the written records of the history, examination and diagnosis to the medical director for his approval; to see that these are written in a book kept for the purpose; to keep a continuous supervision of each patient under his care; to conduct the treatment, subject to the supervision and approval of the medical director; to have the resident physician write at his dictation any change of symptoms that may occur from time to time in the cases; to make re-examinations as often as may appear desirable; to see that specimens of urine, blood and sputa are sent to the pathologist as frequently as may seem necessary; to see that continuous records of the cases are written by the resident physician in the book kept for the purpose; to report to the medical director any pronounced change in the symptoms of any case and summon him in counsel when these seem grave; to keep a supervision over the work of the resident physicians and nurses in his department to report to the medical director any neglect of duty on the part of the psychologist, pathologist or of any one whose work comes under his supervision; to instruct the resident physicians in the wards and in class by lectures; to lecture to the nurses at stated times; to attend post-mortem examination; and to take part in writing up cases for reports and in the scientific discussions of the medical staff. I am of the opinion that the assistant physicians might, with advantage to the patients, to science and to themselves, reside outside the hospital ground, subject to a summons from the hospital at any time, night or day, and be allowed to engage in private practice.

Psychologist. To fill this position properly requires a man of a high order of attainments. He should be chosen for his special

* In those hospitals in which the chronic insane form a large proportion of the population, one assistant physician to every 100 patients would be sufficient.

fitness for the work and his term of office should be for life, unless removed for cause. The remuneration should be sufficiently large to enable him to devote his entire time to the work within the hospital. Every possible means that will facilitate his work should be afforded him. While his department should be as nearly independent of the other scientific departments as possible, yet he should work subject to the approval of the medical director and in harmony with the other physicians of the hospital. He should be required to deliver lectures or read papers at stated intervals before the scientific workers of the hospital. To these lectures all should be admitted who should desire to attend. He should be required to publish two or more scientific papers each year, and make a report of the work done in his department as often as required by the chief medical officer. He should record, or have written in a book kept for that purpose, a careful record of all work done in his department.

Pathologist. The pathologist, who should also be a bacteriologist, should be thoroughly competent for his work. He should receive his appointment for life, unless removed for cause. He should be well paid and required to devote all his time to his work in the hospital. He should promptly and thoroughly examine the fluids of the body sent to him by the physicians of the hospital, make and keep records of the same and report the results as soon as possible. All bodies, on which permission for a post-mortem examination can be secured, should be subjected to a most thorough and exhaustive examination, both macroscopic and microscopic, and the pathologist should see that an accurate record is kept of such work. He should be required to deliver lectures on his subject, publish papers, make reports as frequently as required by the medical director, and take part in the scientific discussions of the medical officers of the hospital.

Resident Physicians. There should be one resident physician for every 25 patients.⁴ Before a graduate in medicine is eligible for this appointment, he should have served one or two years as medical resident in some general hospital. He should be chosen by competitive examination, should have shown a liking for research, and exhibited powers of close and accurate observation.

⁴ One resident physician to every 50 patients suffering from the chronic forms of insanity might be ample.

He should serve without salary, and his term of service should not be less than two years. His general duties should be such as are assigned him by the assistant physician under whom he works, subject to the approval of the medical director. In addition, he should be required to witness all post-mortem examinations, attend all scientific lectures if possible, do a certain amount of work in the pathologic laboratory under the supervision of the pathologist, and make written reports of cases as required by his superior medical officers.

The Scientific Society. Connected with every well arranged hospital for the study and treatment of mental diseases should be a society for the scientific and practical discussion of medical topics. Such a society would, of course, be composed principally of the physicians connected with the hospital, but physicians without the hospital should be encouraged to join the society and participate in the discussions. An interchange of opinions between the alienist and general practitioner of medicine would be beneficial, both to patients and physicians, and serve to bring the alienists of the country into closer contact with the great body of the medical profession. The general adoption of such a plan would soon make hospitals for the alienated centers of learning, teaching institutions, really small post-graduate schools, in which advanced instructions might be given, not only in psychiatry but in neurology, psychology and pathology. The time may come when the most eminent neurologists of the country will be those who are or have been physicians to hospitals for mental diseases.

Training School for Nurses. No hospital, special or general, can be conducted on strictly scientific principles without efficient nursing, and no nurse is competent to co-operate in scientific work until she has been thoroughly trained. The training schools connected with the hospitals for mental diseases should be for post-graduate work. Every nurse before she is eligible for the position of nurse in such a hospital should be a graduate of some training school connected with a general hospital. It is not right to dismiss all the faithful attendants, who have acted as nurses, and who, perchance, have been connected with hospitals for mental diseases for many years. Is there any hardship in the manner in which Dr. Thombs and the commissioners of the Colorado State Hospital are solving this problem? A course

of instructions for the attendants of the hospital has been established. Forty or fifty lectures are given these attendants each year for a period of two years. At the expiration of that time, all who are able to pass a satisfactory examination are retained as nurses, the unfortunate ones are dismissed as incompetent. By a resolution of the Board of Commissioners, passed October, 1896, on or after January 1, 1897, nurses applying for positions in this hospital must present satisfactory evidence of having graduated from some good training school for nurses. After a graduate nurse enters one of these special hospitals, his or her lectures and training should not cease until she has earned a diploma for post-graduate work. I do not believe that our hospitals for mental diseases should establish training schools for nurses, take as pupils untrained help and send them out as trained nurses within two years. Could such a graduate, except in rare instances, secure the position of head nurse in a first-class general hospital? I think we are all agreed that a physician who has had two or more years' training in a general hospital would make a better resident for a special hospital than he would without such general training. If this rule applies to the qualification of the physician, should it not also to the fitness of the nurse?

How can these changes be brought about? How can insane asylums be transformed into scientific hospitals for the study of psychiatry and for the care of those who are mentally sick? How can we get rid of the dread and horror of insanity and the insane, and teach people to regard those who are afflicted mentally with the same sympathetic compassion as they do persons who are stricken down with some fever? How can we effect a change in public opinion so that it will no longer be thought that all the State has to do for the insane is to rear large structures and feed and clothe the inmates at the least possible expense?

The desired changes must come from within the ranks of those of the medical profession who are most interested in the study of mental diseases and in the care of the alienated. They will never have their origin from without. I have tried to show you that the alienists and neurologists should be equally interested, and equally expert in psychiatry and in neurology. It is to the combined and harmonious actions of these specialists that we must look for advancement in psychiatry. Neither the alien-

ists nor the neurologists alone can accomplish one-fourth the good that will result from the concerted action of both. If this be true, and I think no one will doubt it, it behooves the alienist and neurologist to form closer relations with each other and to work as one man in the advancement of psycho-neurology. It seems to me that the first great step in unity of purpose and action might be effected by the union of the American Medico-Psychological Association and the American Neurological Association into one association which might be known as the American Psycho-Neurological Association.⁵ We need not regret one association or society less in this country. Indeed, I have sometimes thought that it would be well for some enterprising American to organize a society for the express purpose of preventing the formation of all new societies.

The next step in the advancement of the cause of psychiatry might be made by all the hospitals for the alienated establishing the positions of psychology and pathology. If the hospitals were so located that the assistant physicians could reside outside the hospital enclosures, engage in private practice and be required to spend a certain number of hours each day in hospital work, much might be accomplished in diffusing a wider knowledge of psychiatry and in creating a greater interest for those who are mentally afflicted. If a scientific society were formed by the physicians connected with each hospital for the alienated, and lectures given regularly to physicians, constituting in reality a post-graduate course on pathology, psychology, psychiatry and neurology in general, these hospitals, their patients and physicians would be less in a world by themselves, would be better understood, and a public response to their needs would be less tardy and more generous than what is the case to-day.

I have said almost nothing of the general executive and economic management of hospitals for the alienated, believing that this and the scientific department should have as little relation to each other as is practicable, except that the medical director should have general oversight and authority over the entire affairs of such an institution.

⁵ Such a union of these associations would result in the adoption of a single medium by which the transactions of the combined associations would be published.

If the assistant physicians were allowed to reside outside the hospital grounds, and to engage in private practice, it might be advisable to divide these into two classes; the more eminent might be termed consultants, and those with less experience, assistants. Consultants in all departments of medicine might with advantage to the inmates be connected with every hospital for mental diseases.

In closing, I wish again to thank you for the honor which you have conferred upon me, for the patience with which you have listened to me, and above all, for this opportunity to advocate a closer relationship between the alienist and neurologist, if a union of these is not possible, and to present to you a plan, imperfect though it may be, for the study and advancement of scientific psychiatry.

You may regard my views with reference to the scientific management of a hospital for the mentally sick as a mere dream. Call the plan as outlined utopian, if you will, but remember, if each of us, both alienist and neurologist, works together as one man in the investigation of psycho-neurology that which may seem impracticable or even impossible in the slow progress of to-day, may be realized as an achieved fact in the to-morrow of scientific advancement.