be passed and moved about freely without causing pain or bleeding, as is the case with normal urethrae. The ejaculatory ducts discharged a gelatinous substance containing non-motile spermatozoa into the end of the tube as it was withdrawn past their orifices; this substance also showed numerous pus-cells, as did the secretion from the prostate expressed at a subsequent visit. The right seminal vesicle was distinctly palpable and tender on pressure.

Treatment and Results.—He recovered under massage of the prostate and seminal vesicles and applications of salicylic ointment (5 per cent.) to the posterior urethra, the applications being made at intervals of a week.

He was discharged in July, 1911, and has had up to the present time no indications of recurrence.

CASE 5.—G. A. H., contractor, unmarried; complained of impotence, feeling of numbness from his waist down, insomnia, "sticking sensation" in his perineum, nervousness.

History.—Patient had had a severe attack of gonorrhea some years previously, accompanied by hemorrhage from the urethra; otherwise past history was negative, as was the family history.

Examination.—Oct. 8, 1911. The conditions present were chronic prostatitis, seminal vesiculitis and fibrosis of the verumontanum, the base of which was contracted so that the part had the appearance of a pedunculated tumor. The openings of the ejaculatory ducts projected from the surface of the mucous membrane, which seemed to have contracted about them.

Treatment.—The prostate and seminal vesicles were massaged twice weekly for ten weeks, at the end of which time the glands and their secretion appeared to be normal. The verumontanum was then swabbed every seven days with tincture of iodine and during the latter part of the treatment every fourteen days. The application of this was at first painless, but the part increased in sensibility as its appearance became normal and in the latter part of the treatment became quite sensitive. The applications of iodine were, of course, made through the endoscope. The patient was discharged in April, 1912.

CASE 6.—W. C. M., decorator, aged 25, unmarried, complained of "masturbation."

History.—Father is an alcoholic; eldest sister has "St. Vitus" dance. Patient had typhoid fifteen years ago; denies ever having had gonorrhea or venereal sores of any character. Right testicle was injured eight years previously, swollen for three days, and then became apparently normal. Patient states that he has always been "nervous" and easily excited. He has never had a complete erection, but when he was sexually excited would cross his legs and an emission would follow; this occurred pretty regularly every other day. He had insomnia, vertigo, pains in the back and loins; was exhausted easily; could neither make mental effort nor concentrate his thoughts on any one subject for more than a few minutes at a time.

Examination.—No discharge from the meatus. Urine negative microscopically and chemically. Urethral mucous membrane (posterior) abnormally pale in color and relatively insensitive to the touch; otherwise negative. Prostate very large, firm, symmetrical; no adhesions; median furrow present; no areas of induration; very sensitive to pressure. Large quantities of pus in the secretion expressed from the prostate. Seminal vesicles negative on palpation.

Treatment and Results.—When the prostate was massaged the patient had a vigorous erection, the first one, so he stated, that he had ever experienced. He has improved steadily both subjectively and objectively under treatment, which consists simply of prostatic massage twice weekly. Three months after the institution of treatment he had a successful coitus. This was the first he had ever experienced, although he had tried a number of times before appearing for treatment. His pains, insomnia and other subjective symptoms disappeared within eight weeks after starting treatment.

CONCLUSIONS

1. Sexual neurasthenia is always due to definite pathologic conditions in the genito-urinary tract.

2. The lesions may be in any part of this tract.

3. Because of the exceptionally rich supply of sensory nerve-endings in the prostatic urethra, the changes in this part, especially in the vicinity of the verumontanum, are most apt to give rise to this type of neurasthenia.

4. The conditions give rise primarily to a local neuritis or neuralgia which is the intermediate cause of the neurasthenia.

5. There may be in certain instances a toxic element which reduces the resistance of the sympathetic nervous system. This is especially true of infections of the seminal vesicles or prostate.

6. The condition is most apt to occur in those of hereditary or acquired neuropathic disposition.

7. The physical impotence resulting in many of these cases acquires a psychic element in the course of the disease which must be dealt with as a separate entity after the removal of the primary cause.

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THE TEACHING OF PSYCHIATRY

A REPLY TO DRS. BURR AND DERCUM

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The awakening of interest in the problems of insanity is leading to the recognition of the need for training the medical student in this important branch of medicine. In introducing this topic into the curriculum it is all-important that proper consideration be given to outlining the course of instruction. There recently appeared in *THE JOURNAL* two articles on the teaching of psychiatry by authors whose names and deserved reputations must lend great weight to any cause they may champion. Inasmuch as they express extreme views it would not be untimely, it appears to me, to discuss and criticize the attitude taken.

In both papers the most striking feature is the wholesale condemnation of modern psychology, which both authors seem to consider as more or less synonymous with the Freudian theories. To Dr. Burr, who justly points out that the older psychology "does not make the study of psychiatry any easier or any clearer," the "newest psychology" is the "filthiest possible explanation of mental disturbance." If it is an explanation at all the use of such epithets is surely unnecessary and does not throw any new light on the problem. The detailed study of the stools, which is essential in some diseases, might well be called filthy, and yet it is not omitted for that reason, nor do those who perform the work become thereby contaminated. Dr. Burr adds that "surely the sexual element in insanity is large enough"; but apparently he thinks this sufficient reason for leaving it alone in disgust and not an indication for closer study.

Both authors seem to see in the Freudian doctrines nothing but "a means of mental cure." Dr. Dercum is satisfied with scoffing at the thought of spending from six months to three years in the study and treatment of a case, while he leaves it to be assumed that the

1. Burr, C. W.: *The Teaching of Psychiatry*; and Dercum, F. X.: *The Teaching of Insanity*, *THE JOURNAL A. M. A.*, April 5, 1913, pp. 1054-1057.

patient could easily be "cured" in much less time by some other method of therapeutics, as if that demonstrated the falsity of Freud's conclusions and methods of study. He tells us also that the Freudian theory applied to dementia praecox is as old as the description of a disorder under that name by Kahlbaum and Hecker. Whether he intends thereby to imply that he concedes its truth or brands its falsity he does not make clear.

Whether we accept the extreme developments of the Freudian school or not there are involved in Freud's conceptions certain broad principles which are well founded in fact and are not in any way invalidated by the application he makes of them. These principles are not original with him, but it must be conceded that his work has done much to crystallize and clarify our views on a biologic basis, even if only, as some think, by giving rise to study and discussion.

All this has nothing to do with the question at issue, however, for no one has yet suggested that an attempt be made to teach the Freudian doctrines to medical students. This does not mean that therefore psychology should be excluded from the curriculum. One does not cut down an apple-tree because there have been grafted on it certain branches which bear fruit not to his liking. It is as impossible to teach psychiatry (abnormal cerebral functioning) without a basis of psychology (normal cerebral functioning) as it is to teach pathology without knowledge of physiology. If only the fundamental facts of the integrations in the lower unconscious nervous activities (Sherrington) were grasped as a foundation for the understanding of the corresponding conscious activities of the brain, many of the objections would be overcome. That stimulus which is of greatest importance to the welfare of the individual and species has a prepotent control over the effector mechanism of the body through the cerebral associative pathways just as it has through the spinomedullary connections. This principle must necessarily imply the overwhelming potency of problems of self- and race-preservation in conscious reactions (brain in action) as in reflexes.

The sole purpose underlying cerebral evolution, like all other evolution, is that of enabling the individual better to take advantage of his surroundings for the preservation of himself and his kind. Of these two ends, the latter, in adult man as in lower animals and even plants, is by far the more important. Hence we need not be surprised to find that disorder of the mind is present when these fundamental aims of life cannot be adequately accomplished. To put this in another way, the individual who is, for any reason, unequal to a suitable adjustment in the struggle for the satisfaction of his desires, these expressing only the biologic needs of self- and race-preservation, is abnormal. The clinical picture presented as the result of this failure to meet conditions will vary with the adjustments which the individual does make; for it is evident that since the prime laws of all living matter are those of self- and race-preservation some adjustment must always take place. These may be more or less unsuited to the purpose to which they are applied and their particular form will be determined by the nervous mechanisms present, whether inherited or developed by personal experience. Disease of the nervous system will, of course, act by interfering with the nervous associations. Some of the maladjustments arising from disease or faulty make-up represent what we call insanity.

A bridge will carry a certain load and will break down under a heavier burden. This is not necessarily due to rusting (disease) of its parts but may result

simply from a demand beyond its strength. Why should we, then, hesitate to admit that some individuals are so constructed as to be incapable of withstanding the stress and strain of even an everyday life in the complex conditions of society? And why should we, with Dr. Burr, insist on "the fact that insanity is a disease just as typhoid fever and tuberculosis are diseases"? It is such conceptions as this which render it necessary for Dr. Burr to complain that "gentlemen who write popular articles for the magazines have impregnated the public with the idea that adenoids, lateral spinal curvature, ocular defect and other like things are the cause of all insanity."

Dr. Dercum especially emphasizes the "unfortunate tendency at present toward speculative psychology." It seems at least equally unfortunate that there should be also such a tendency to speculative pathology. By all means teach the *facts* of pathology which to be honestly carried out must include the facts of failures in adjustment as well as of disease processes; but let us avoid speculative relations to internal medicine as we do speculative psychology. In a recent article Dr. Dercum points out some admittedly hypothetical relations between dementia praecox and insufficiency of the adrenal system. Other authors (Berkeley) have advised, and successfully (*sic*) performed, the removal of part of the thyroid for the same disease on the equally tenable (or untenable) hypothesis of there being a hyperactivity of this system. Even the correlation between liability to dementia praecox and to tuberculosis, on which Dr. Dercum lays so much stress, is far from adequately demonstrated. It is not true that the great majority of dementia praecox patients die of tuberculosis, otherwise there would be no need for our huge hospitals for the insane, of which the vast majority of the inmates are in the terminal stages of dementia praecox. These individuals usually die of old age or some of its accompanying diseases. Bleuler makes the emphatic statement that the percentage of dementia praecox patients dying from tuberculosis in his clinic is not greater than that of the general population in the regions from which the patients are drawn. Even were the opposite a demonstrated fact it would not in any way prove that the ductless glands had anything to do with the development of the mental disorder.

The correlation with a liability to infection with tuberculosis would, even if proved, show nothing beyond the possibility that a body ill adapted to adjust itself to the complex conditions under which it has to conform to its biologic needs may be also ill adapted to cope with the micro-organisms which are part of its environment. It would be only another index of faulty make-up, exactly comparable with the instability shown by similar individuals in adjusting themselves to alcohol and other toxins.

If one were to judge from the articles by Dr. Dercum, one would be led to the conclusion that he believes that emotion, delusions, etc., are the result of faulty glandular activity. According to this line of reasoning a man would become angry and strike because his thyroid or some other gland was not functioning properly, and not because the situation in which he found himself called for this as an adequate response. Surely the more reasonable view is that the adrenal system cooperates with the rest of the body in making adjustment to the situation. This is expressed consciously as what we call a feeling of anger. Disorder of adjustment might then quite well be accompanied, without being caused, by disorder in

the function, not merely of the adrenal system, but of the whole body.

The psychology of the insane is in no wise a different subject from that of the sane. Thoughts, delusions, hallucinations and emotions are not secreted as is the bile or urine; they are the brain in a state of activity. Nerve-cells do not act by secreting thoughts; they merely serve as conducting mediums to harmonize the effector mechanism of the body with its environment. This conductivity may be raised or lowered both physiologically and by disease, but it nevertheless still remains only conduction. The only possibility in the way of disorder is therefore one of conduction and the same laws must hold in regard to nervous integrations in disease as in health. It may be true that certain paths have been destroyed by disease or rendered incapable of function in some other way. But the spread of nerve energy along the paths still intact and open will follow exactly the same laws of biologic importance and frequency as those which obtain in health.

Hence adherence to the methods of teaching which regard the various manifestations of disordered mind as independent "symptoms" cannot fail to create erroneous impressions and do more harm than good. It is absolutely essential that the insanities be studied as disorders of adjustment as well as in their relation to internal medicine, if any grasp is to be obtained of what the individual cases mean. In other words, they must be studied as psychologic, as well as pathologic, problems.

The value of such a biologic conception of cerebral or mental activities is not limited to the study of its specific disorders known under the name of insanity, but has a much broader application for the physician in his dealings with patients no matter what their ailment may be. It has too long been forgotten, in the practice of medicine, that we are treating not diseases but human beings, and that a knowledge of this individual's modes of psychologic adjustment may well have greater value in determining the actual procedure to be adopted than the broadest knowledge of materia medica. The importance of the patient's attitude toward himself, his environment and his health or disease is frequently greater, as regards etiology, therapeutics and outcome, than all other factors concerned, and yet it is the one which we most neglect. Mental disorders represent Nature's experiments, from which more can be learned concerning the biologic laws of conscious adaptation than from any other source.

The value of the study of psychiatry for the medical student is hence not limited, as Dr. Dercum suggests, to acquiring the ability to recognize mental disorders early and to handle them reasonably, but extends to the whole realm of the practice of medicine by the insight which it gives into the highest known means of adjustment. The study of these mechanisms is the psychology apparently banned by Drs. Burr and Dercum.

I wish to insist, therefore, that the broad principles of the newer biologic psychology are essential to and part of the study of even elementary psychiatry. Without them the teaching of mental disorders must remain a hopelessly unintelligible, dry-as-dust concatenation of uncoordinated observations.

Diagnosis Based on Probabilities.—Never indulge in that form of reasoning which is supposed to be based on probabilities. "An ulcerated lump of the tongue, the patient is a woman, therefore it is not likely to be carcinoma." Remove it and see what it is.—C. B. Lockwood, in *Clin. Jour.*

THE STAPHYLOCOCCUS-SPRAY TREATMENT OF DIPHTHERIA CARRIERS

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The presence of diphtheria bacilli in the throats and nasal passages of patients convalescing from the disease long after all clinical symptoms have disappeared constitutes one of the most prolific sources of infection the health officer has to deal with in combating this disease. Just what the average period of persistence in virulent cases of diphtheria is it is hard to say. Graham Smith and Cobbett's¹ tables give it as 31.6 days and estimate that one-third of the cases exceed this time. Our experience, however, has been that according to the cultural method the average period of persistence in Iowa is about sixteen days. Henry Albert² says:

Unfortunately, however, there are some in whom the bacteria remain so persistently that they can still be found for from five to seven weeks, in one of our cases for seven weeks and in one case on record for twenty-three weeks after clinical recovery from the disease. Another condition which has been the subject of considerable study in recent years has been the presence of diphtheria bacilli in the throats of persons who are not, nor, so far as known, have ever been affected by diphtheria. These diphtheria bacilli carriers are of most frequent occurrence when diphtheria is prevalent in a community. Fortunately the bacilli living under such conditions are frequently of low virulence and in some instances have lost their disease-producing power entirely. On the other hand, their virulence is often of full strength and even though they may not produce any disease in the carrier, when transferred to other persons, they may produce the disease in its most virulent form. It is very certain that diphtheria has been kept alive for months in institutions and communities by such carriers. Indeed it is quite probable that carriers with either a normal throat or a slightly "sore" throat are the source of more cases of diphtheria than persons affected by well-marked cases of the disease.

A ruling of the State Board of Health in Iowa provides that before a diphtheria patient can be released from quarantine, two consecutive negative reports must be obtained from the State Laboratory on cultures taken from both nose and throat. During the last twelve months we have had a number of cases the cultures from which remained consistently positive after the normal period of persistence and after all manner of local treatment had been used. Following the reports of Schütz,³ Page,⁴ Catlin, Scott and Day,⁵ Lorenz and Ravenel⁶ and others⁷ who had successfully used the staphylococcus spray in such cases, we decided to use it in all cases from which the cultures remained positive after four weeks.

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