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"Quantam ego quidem video motus morbosi fere omnes a motibus in systemate nervorum ita pendent, ut morbi fere omnes quodammodo Nervosi dici queant."—*Cullen's Nosology: Book II., p.* 181—*Edinburgh Ed.* 1780.

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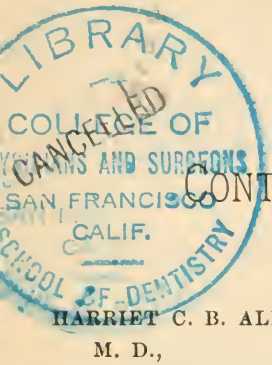

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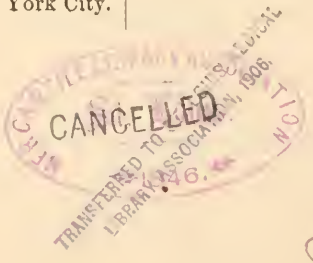

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Alienist and Neurologist.

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ORIGINAL CONTRIBUTIONS.

The Successful Management of Inebriety Without Secrecy in Therapeutics.*

By C. H. HUGHES, M. D., St. Louis.

DR. Benjamin Rush, in his "Diseases of the Mind," published in 1812, recommends "The establishment of a hospital in every city and town in the United States for the exclusive reception of hard drinkers" and says "they are as much objects of public humanity and charity as mad people; and religious, moral and physical remedies * * * should be employed * * * for the complete and radical cure of their disease."

Since the immortal Rush rested from his labors, vast progress has been made and vaster still is making in the management of the drink habit and in the treatment of the drink disease. Facts which but a few years ago advanced observers, like Morel, Magnan and the few neurologists of their time, first took note of, touching the hereditary transmission of neuropathic instability and dipsomaniacal tendencies through ancestral alcoholic excesses and *vice versa*, have not only passed into the possession of the profession generally as practical knowledge, but have become largely the mental possessions of the people.

* Read before the Section on Diseases of the Mind and Nervous System, Pan-American Medical Congress, at Washington, D. C., September 7th, 1893.

The profession, the people, and even the unfortunate victim of the drink habit himself, have come to the understanding that habitual resistless inebriety is a disease and chiefly of the brain and nerves, and under this impression, resulting from medical research and teaching, the drunkard and the dipsomaniac now seek and the profession now give, medical relief to the sufferer, or the friends of the inebriate procure this relief for him.

The general professional consent and popular recognition of the fact that inebriety is a disease, are the results of the impressive and persistent efforts of the British and American Associations and other medical societies having in view the cure of inebriety.

In the general recognition of the fact of the disease basis and remedial possibilities respecting this baneful, morbid vice of man's nervous system, we are hopeful of such an inestimable physical and moral fruition as must ultimately result in marked national re-invigoration, and in the postponement, at least, of national degeneracy impending through this, as one of the causes of racial decline.

We know now how to successfully scaffold and prop and steady the tottering nervous structure of an inebriate neuropath, and sustain it in fairly normal function pending its effectual reconstruction, and we know how to permanently rebuild this damaged nervous system, through the advances neurology has made during the life of the present generation of physicians, though, alas, we cannot always remove the baneful neuropathic entailments of chronic alcoholism upon the immediately succeeding generations of the drunkard, while we may and do, do much to ameliorate, modify and ward off the baneful neurotic *sequelæ*.

The unchecked degeneration of whole families through generations of neuropathic descent, such as Morel and others have presented, as the frightful admonitions of scientific research against the fatal neural and psychoneural degeneracy of alcoholic excess, are not possible

under the skillful management of modern medical art as now practiced, especially in the neurological department of medical work.

It may profit us at this juncture to recur again (as mentally we often do to similar personal observation) to one of Morel's typical tables illustrative of the course of alcoholic neuropathic degeneration unassisted by our art, and I take this table from our classical and observant *confrère* across the ocean, Dr. Henry Maudsley, because the interesting researches of Morel into the formation of degenerate or morbid varieties of the human race have served to furnish to the philosophical mind of this distinguished neurophysiologist, as it has to you and me, a philosophical view of the chain of events by which alcoholism as a cause of individual degeneracy continues its morbid action through generations and finally issues, when unchecked by the arts of our profession, in extinction of the family.

First generation.—Immorality, alcoholic excess, brutal degradation.

Second generation.—Hereditary drunkenness, maniacal attacks, general paralysis.

Third generation.—Sobriety, hypochondria, Lypemania, systematic mania, homicidal tendencies.

Fourth generation.—Feeble intelligence, stupidity, first attack of mania at sixteen, transition to complete idiocy and probable extinction of family.

How many painfully impressive pictures like this have we not seen in our several spheres of observation and practice, and how many impending family calamities like this are now avertable through the resources of medicine and philanthropy which our present advanced neurology offers the neuropathically unstable? It is a source of professional congratulation that the medical profession, and especially our department of professional endeavor, has brought relief to the inebriate, and mitigation, with the hope of ultimate extinction of its entailed neuropathic evils to the human family, if only we are permitted

to treat this disease as its pathology demands, and an enlightened public sentiment promises this as the consummation of our professional labors and hopes in behalf of man's highest and best interests for the closing of the Nineteenth Century.

The profession and the public believe that inebriety is a disease. They now believe it can be successfully treated and that it ought to be treated, not only for the good of the inebriate, but for the welfare of his descendants. They have now the knowledge that precedes wise action.

Drunkenness is unpopular; inebriety is on the decline; dipsomania is dangerous to the drunkard's descendants, as well as detrimental to himself.

Medicine has given to the world the substantial basis of a new reformation. It has sounded the alarm: it offers the remedy, and, on this score, we think humanity is on the road to safety.

This is one of the jewels we place in the crown of Ninetee n Century progress. We give it freely to the cause we crown without copyright, letters patent or secret process.

With the diffusion of knowledge among the people and their advisers, the general profession, and especially the family doctor, that alcoholism and dipsomania are grave diseases, with graver physical and psychical *sequelæ*, hope has dawned for the drunkard, and the prospect of the final obliteration of inebriety and its terrible evils to the individual, the family and the State, brightens. Henceforth, the unfortunate victim of alcohol is to be cured and then reformed through the seeking of medical relief, and such as are not confirmed in baneful habits of intemperance will turn in time from the social tempter and avoid the neuropathic thraldom of this devil's chain of evil tyranny.

Many men who fall into the drink habit are unaware of the terrible neuropathic heritage of unsteady nervous organism bequeathed through bibulosity and other nerve-

depressing influences operating on their ancestors. They know but little of the organic evils and entailments of alcohol. They know chiefly physical, moral and social discomforts and inconveniences of getting drunk, which are as nothing compared with the damage to their brains, nervous systems, blood-vessels and vital organs.

Not understanding the tyranny of their unstable nervous systems they censure themselves as fools for each repetition of a bout of drinking and resolve and re-resolve not to do it again, then go on and die the same, in the majority of instances, unless aided by medical art to overcome the otherwise resistless tyranny of a viciously endowed organism, which impels to the fate they dread without the power to draw away from it, yet thinking each time they drink it will be the last.

The trouble in the past about this blended vice and disease has been in the failure to seek, by suitable change of environment and proper medical treatment, that renovation and rebuilding of the damaged organism which makes resistance to alcoholic enslavement a possibility in the organism of the average habitual or periodic inebriate. That profession which has rescued mankind from so many portentous evils after other resources have failed, is ready to succor him now from the thraldom of damaged organism and psychical weakness and neuropathic instability.

We need not now go deeply into the pathology of chronic alcoholism, but cursorily glancing at the subject we have only to recall the findings of Virchow, Richardson, Horsley, Percy and Binz, of water decreased and fibrine changes in the blood, sometimes quite fluid, at others, coagulated, pure alcohol in the tissues, fatty globules in the circulation, fibrinous clots and excrescences in the vessels, vascular dilations, anæmia, deficient hæmoglobin, of old and excessive alcoholics.

Nor need we dwell upon other destructive and degenerative changes, which, like the annihilated phagocytes of alcoholized persons to which their well-known

lack of resistance to general morbific influences is due, are secondary to the poison. We have to treat these conditions as *sequelæ*. This fact and the other prominent fact that alcohol abstracts fluid from the tissues of an organism whose very nerve cell is bathed in lymph, whose cerebro-spinal axis, as Obersteiner tells us, lies in a sea of lymph, an organism to which water is the *sine qua non* of life, give us the chart and compass of our course; and the polar star is the care and cure of the damaged brain, the brain and associate spinal and ganglionic system from whence originate the illusions, the hallucinations, delusions, anæsthesias, paræsthesias, hyperæsthesias and hyperalgæsias or the peculiar polyæsthesias of these cases. All of these sensory troubles, together with the well-known motor symptoms, the motor paresis, muscular tremor, twitchings and inco-ordination, the *paresis* of the cortical areas of the brain, where the volitions center and whence they proceed, impaired and vitiated, in the drunkard. To these and other symptoms which go to make up what Bevan Lewis designates as the motor anomalies of an alcoholic etiology and all the psychical symptomatology, which this writer and Huss and Magnan and Maudsley, Usher, Wilson and many others describe, give us adequate outline of the detail work necessary for the thorough and permanent cure of the inebriate. He will be largely made over and made whole. No three weeks' treatment will suffice. We may break him for the time of his habit in three weeks and yet leave him a wreck for life. Our duty is to repair him and make him anew if he will permit us to do it. We cannot ignore the protean nature of alcoholic symptomatology or forget the fact in our treatment of this disease that no poison except the virus of syphilis plays so extensive a *rôle* in the morbid affections and degenerations of the tissues, nervous or non-nervous, as alcohol.

When illustrated chapters in the pathological anatomy of alcoholism, especially like those in Bevan Lewis' recent text-book on "Mental Diseases," are so readily

accessible, and when, besides, the cultured character of my distinguished auditors is considered, it is obviously unnecessary to dwell in detail on the pathology of alcoholism. I could not enlighten you—you could rather enlighten me on the subject.

The point of this paper is psychical assistance and neurotic support, and neurotic and organic reconstruction. We must first secure the man's safety from the thraldom of drink and repair the secondary damage later. We must first put out the fire and save what remains of the still standing structure, prop the weakened walls, and then rebuild and remove the damages. The foundation and framework of all reconstruction of the drink-damaged dipsomaniac is in the nervous system. If we can rescue that from immediate and ancestral damage, we can save the man, but we must not leave him, after our treatment, damaged and shattered in his brain or nerves or blood or vital organs. We must make him strong and resistive in the higher inhibitory volition and directing realms of the cerebral cortex and restore the normal functions within and presided over by the lower cerebrospinal and ganglionic centers.

It is obvious that in attempting to effectually and permanently cure and reform the inebriate we undertake a large contract, one that cannot be fully complied with in the brief space of a few weeks. When we have broken the chain of morbid habit there yet devolves upon us the duty of after-care that the victim's health may not be permanently shattered, and that insanity and other evils may not follow.

The first essential to the cure of inebriety is the substitution of a less harmful support to the shattered brain, nerves and damaged vital organs, than alcohol, and I name them in their order of preference. The morphias or opium, strychnia, the quinias and cinchonias, valerianates, cocas, the ammonium bromide, etc., etc.

The second and concomitant essential is water—plenty of water or its equivalent, milk. The tissues must have

water, the blood must have it, the emunctories and the skin must have it.

The third and concomitant essential is rest. Normal nature tired prescribes it for every bodily or mental overtax. Exhausted abnormal nature always needs it and demands it often. The machinery of the human organism in all its parts—psychical or physical—must be put at rest for the best repair.

The chief essential for rest is a new and proper environment, and subsidiary to this are the chemical restraints therapeutics may place on over-acting cells: chloral, sulphonal, the bromides, the vegetable narcotics, old and new, the valerianates, the opiates, cephalic galvanization, and soothing music and the bath.

The fourth essential is the removal of the *debris* of the last and previous drunks and of the interim of organic torpidity and depressed vitality. The scavenger cells, diminished in number or absent as they are *in toto* from the blood, and the emunctories have failed in their physiologically appointed work; the congested brain, liver, stomach, intestinal tract, mucous membranes generally, torpid liver, bowels and skin, are to be relieved and set at their proper work again.

Here, water, saline laxative water without stint, is the remedy *par excellence*. It flushes the intestinal tract and the excreting organs. Nature suggests it first of all after the rest she enforces after a prostrating spree.

I need not here dwell on the proper therapeutic blendings for this hydrotherapy to give more special direction to liver, kidneys, skin or bowels.

My preference is for an effervescent saline that clears out the alimentary tract and tranquillizes the brain and nerves at the same time (though mercurials are often not amiss), and then to properly start all the pumps of the system that may not be acting well and maintain them in moderate activity till there remains no pathological clogging of the wheels of physiological activity, but I do

not approve of over-active catharsis. Moderation and not violence in this regard is my motto.

The fifth and concomitant essential is reconstruction of the undoubtedly damaged cerebro-spinal centers and the several affected organs of vegetative life. A drunkard is more or less damaged in many parts of his anatomy at the same time. He comes more nearly to being affected all over in spots than most patients we have to treat.

We begin reconstruction with the beginning of treatment. It begins with rest and sleep and food and change of surroundings, when Nature, without further aid, can effect it, rest, nutrition and phosphates, the hypophosphites and the reconstructive hæmatics and other rebuilders of the blood. Milk, beef-tea and capsicum and other stomachics. Early in the treatment a hair of the dog that bit him—a milk-punch or egg-nog, egg phosphates flavored with wine or whiskey, the latter soon withdrawn. In this stage the wines of coca, the beef, wine, iron and strychnine compounds, calisaya cordials, egg phosphates and stimulant tonics, are temporarily admissible.

When the patient is cured of his recent attack of delirium tremens, or recuperated from his last debauch then the hypodermic medication that is to hold him from further relapse, to re-tone his system and break him of his taste, must be instituted, if we have not begun it sooner.

The sixth and final essential, to which all our previous efforts lead us, is destruction of the drink craving, and this is done on physiological principles. The drink craving is pathological perversion of physiological cell action, and lies in the realm of the cerebral cortex. This part of our subject belongs to psychiatry and psychical suggestion, effected by a therapy directed to these morbidly acting centers of the brain, accomplishes our purpose. When the drink craving comes on, having in the meantime rebuilt the shattered brain and nervous system and restored the mental tone as much as possible, we do not

absolutely inhibit the use of the accustomed drink, but train the drink victim's own inhibitions, first, by suggestion; second, by moderate indulgence properly treated.

We do not say, "You shall not, but you had better not drink. You know it is poison to you and you are its slave. You should resist. Your treatment has made you strong. You *can* resist. Whiskey no longer tastes as good to you. You no longer need it. You have the power now and should assert your manhood," and with these suggestions, perhaps the victim will try the liquor, we give him *spiritus frumenti* f℥ij, *cum vini antimonii*, f℥i, and repeat *ad libitum*, or we have previously given him apomorphia with aurum bichloride for psychical effect.

Under this or similar management of the appetite, the victim acquires a disgust for his favorite drink, he discovers his inhibition of the propensity is strengthened, and a disgust supplants the taste, which abides till he is fully restored in nerve tone and power to permanently resist and assert his manhood and maintain it against all future assaults of the foe.

As I cannot, in the brief time allowed, further detail my plan of treatment, this outline must suffice, with the promise in another communication of special prescriptions and combinations, embodying the plan of treatment here outlined, and which has proven successful in desperate cases.

After your patient is cured, after the toxic effects of alcohol have gone from the blood, and the higher and lower nerve centers and the damaged tissues of the body have regained their normal nutrition, powers of assimilation, and strength of physiological action and resistance; after confidence in his strength has returned to the patient, he must be warned to never again have confidence in his power of resistance with alcohol in his blood. Let him that thinketh he standeth then take heed lest he fall again. The cure of the drink habit is not always perpetual; it is not everlasting without the aid of the

patient himself. Though to some the appetite never comes back, to others it is not safe to trust it with temptation. So that the safe plan, since no inebriate fully knows the full extent of his own inherent organic instability, is to "touch not, taste not, handle not," ever after. His treatment leaves him strong enough to say "No," and "Get thee behind me, Satan," to his tempter. It does not always leave him so strong that he can take the tempter to his bosom. He cannot always try a tussle with the tempter and not be thrown.

Treatment of Nervous Diseases in Sanitariums.*

By James K. King, M. D., Ph. D., Watkins, N. Y.,

Glen Springs Sanitarium.

THE purpose of this paper is not so much to advance new principles as to make clear and emphasize those already known, but not usually within the reach of the general or private practitioner. It is an established fact that chronic nervous diseases are the most difficult class to manage in private practice. I except in this statement of course, mental diseases for which suitable institutions are now successfully established. If I am able to throw any new light on this complex subject, the object of this paper will be fully realized. It may be well at the very beginning of this discussion to say that in order to make clear some of the methods and combinations of treatment, as well as to explain some of the cases referred to hereafter, it will be necessary to make some personal references. Twenty years ago, I began the study of nervous diseases under one of the most distinguished superintendents of the Northampton Asylum. The first ten years of my study and practice was chiefly given to brain and nervous diseases. A large majority of the cases that came under my care were women. In so many cases the real causes of the mental and nervous disturbances were found to be reflex, that I was led to search deeply for the original as well as the exciting conditions, and to try many experiments for the relief of symptoms varying in their severity, all the way from mania and profound melancholia and malnutrition to insomnia, headache and hysterical excitement. In

* Read before the Section of Nervous and Mental Diseases, Pan-American Medical Congress, Washington, D. C., September 6th, 1893.

the grosser uterine, bladder and liver, pathological changes, the connections are easy to trace, but when the deviation from the normal condition is slight, it requires a close study to detect the relaxation of reflex symptoms. From these studies and experiments, these failures and successes, I gradually evolved the idea that it would be wise to combine two dependent specialties: neurology and gynecology. I could get no light on the question of this quality of specialties, so I made an experimental trip to Europe. Convinced of its real and practical value I gave up my work at the end of ten years, and went abroad for two years of study, devoting my time to the development of the union of these two specialties, and since my return I have carried them along together with much satisfaction. I am free to admit, however, gentlemen, that I believe this system can be carried out much easier in a medical institution than outside in private practice.

Specialties cannot be too highly esteemed and zealously encouraged. Specialties have elevated the practice of medicine from the routine and drudgery of empiricism up into the character and dignity of a science. While all this and much more is true, yet there is need for caution. Humanity is like the pendulum of a great clock; we swing to one extreme or the other, never stopping in the middle ground. I have often thought of this while watching and thinking of Galileo's Great Bronze Lamp as it swings to and fro in the majestic duoma at Pisa. It was and has been and will be so in all professions. It has been so in medicine. When the literature and lines of investigation became too extensive for the individual mind and time to master, then, born of necessity, specialties blossomed into life. There is now danger of going to the other extreme. There is danger that specialties will become too special. In the last three decades specialties have been like trees grafted into the old stock, and had their root and vitality in the training of general practitioners, who become specialists

afterwards. In other words, they were grafted in the top. The danger is now that men want to be specialists without any general training or experience. There are men who rather pride themselves on not knowing anything outside of their specialty.

Would it seem immodest or presuming for me, before proceeding further to speak of the appliances, methods and treatment of nervous diseases, to make a suggestion?

I will venture. I would suggest that we have swung too far; that specialists are too much divorced, and should be brought into more intimate and vital relations with each other. I would advise that specialists become partners or have adjacent offices, or where practical combine certain special lines of work, that they may examine cases and study symptoms and watch closely results and methods of treatment together. I would have the neurologist and gynecologist, the abdominal and general surgeon, the obstetrician and pediatrist, etc., side by side.

I am satisfied from the experience born of a busy practice, covering a period of eighteen years in the treatment of nervous diseases and diseases of women, that men will be far more successful in proportion as they work together along these lines. A carefully prepared record of four thousand cases bears witness to the truthfulness of this statement. A long list of cases come up to illustrate these facts. Cases that had gone to the best nerve specialists, and had the most thorough and scientific treatment for their nerve troubles, and had not improved. Why? Because most of the difficulties were reflex. These same cases had gone to the oculist, and by him had been sent to the gynecologist. At his skillful hands they had been thoroughly treated for the troubles which he found, were they inter or intra-mural, para or peri-uterine, ovarian or tubal. But still the patients did not improve. Why? The treatment stirred up the already overwrought brain and hyperæsthetic

nervous system, and the headaches, insomnia, irritability and other symptoms grew worse. Finally these patients become discouraged and go home. What is the trouble? Were not all these men skillful? No one will question that fact; there are none better. Where then is the defect?

I venture to assert from clinical experience that if these same men could have been combined in one, or could have treated these patients' nerves, eyes and pelvic troubles conjointly, and each watched the effects of the other's treatment from day to day, instead of having them by installments, every one of them would have gone home well. I will only cite one case, as time is limited:

Mrs. B. J., age 42, mother of four children, youngest ten years. Marked neurasthenia with melancholia, insomnia, gastric irritation and severe headaches. Uterine hyperæmia and prolapsus. She had been skillfully treated by the best neurologists and gynecologists abroad and at home, and had been through the hands of the best oculists. She had been treated separately by some of our best men in New York for two years continuously, and all the symptoms had increased. The melancholia had deepened until it had assumed a suicidal type. At this stage she came under my care. It was an almost hopeless case, for she had tried nearly everything in the way of remedies and rest, and had had a good deal of sanitarium treatment. I undertook the case without much prospect of success. At first I shared the responsibility with a lady physician, but finally took entire charge. After some weeks of a carefully modified course of systematic treatment, during which I followed closely all the details, she improved to a certain point, and seemed to hold only what she had gained. Then came the queston of repairing a very slight laceration which every one had thought of little or no consequence. I had noticed, however, that pressure on the cicatrix produced some of the nervous symptoms. I determined to try the experiment. I repaired the laceration, and although it was impossible to keep her quiet or even in bed, the result was good. Everything seemed to aid in her improvement, and she entirely recovered.

In this paper I will endeavor to state clearly the reasons why we believe that nervous diseases can be more successfully treated in sanitariums than in private practice.

1st. We all recognize without demonstration that one of the most valuable remedial measures in the management of nervous troubles is change of location, even though the surrounding conditions be not materially improved, and the value of this change is increased in proportion to the merits of the environment.

In the city of Philadelphia, Dr. Wm. B. Atkinson has found that convalescent patients receive great benefit in being moved from one part of the city to another. This is often practicable when their means and circumstances do not permit of a more decided change. I have made it a practice for years, when patients were recovering from a severe illness, to change them as soon as it was safe to another part of the house with conditions as different as possible; also when a patient has been very ill in a room to change the location and surroundings. I have always found benefit follow these changes. There are always in our widely diversified climate resorts where we can send our patients and secure satisfactory climatic conditions, but very often many of the elements necessary to success are wanting.

2nd. In these days of improvement and progress in every line, there is no department of science and knowledge, pertaining to health and happiness, that has made more solid advances than that which we might call medical hygiene. Able bodies of distinguished men are devoting their best energies to the advancement of the foundation principles upon which the preservation, as well as the restoration of health, nay even of life itself, rests, and their combined labors are being richly rewarded. When our surgeon-general, backed by our Federal government, establishes a post-graduate school largely to advance the study of military hygiene; when such men as Mr. Ernest Hart can unfold with mathematical precision the hygienic principles that

hold the secrets of controlling the dreaded ravages of cholera; when hygiene is made a special feature of a distinguished medical gathering like this, and a Publishing House like the University of Pennsylvania Press embodies among its journals one on hygiene, we cannot fail to be deeply impressed with the importance of the subject.

In this day a sanitarium to be worthy of the name, must not only be situated in a healthful and bracing climate, surrounded by beautiful and varied scenery, possessing a variety of woodland shade and sunshine, and a diversity of entertainment, but in addition it *must* possess that without which no sanitarium or private hospital is worthy of patronage, a system of drainage that is as near perfect as human skill can make it. Elevated situation is an essential feature in the accomplishment of this end. We do not yet begin to know how much disease has its root back in the mysterious and secret laboratories of sewer gas, and to have a real sanitary institution, it must be free from these noxious influences.

3rd. A sanitarium that will command our confidence must not only be pleasant in its surroundings, bracing in its atmosphere, diversified in its entertainments, and free from any taint of sewerage poison, but it must also have a good table. By a good table I mean a generous, wholesome, well-cooked dietary. This is an absolute essential to the successful treatment of most diseases, and especially is it true of nervous diseases. How many of us have been disappointed in the results we hoped for in sending our patients away for improvement?

The location, the air and climate, the surroundings, and even the sanitary arrangement generally, may have been good, but with food poorly selected, badly cooked and unwholesome in every way, we find our patients have lost instead of gained. I need not waste time in telling this able body of physicians how necessary in treating nervous diseases is the question of nourishment. Many cases would recover with pleasant and healthful

surrounding and proper nourishment without much medication, while the same cases would not improve materially however favorable the other conditions might be if the table was unwholesome.

4th. A fully equipped sanitarium should have good mineral springs for both internal and external use when possible ; the reasons for which will appear later in this paper.

5th. A remedial institution of this kind in order to do its best should not only have pure and mineral waters, but it must have a complete system of baths, which can be readily adapted by skilled assistants to any pathological conditions that may arise. It must also be furnished with apparatus for giving every variety of electrical currents; also it must be provided with skilled assistants and machinery for giving all the forms of manipulations and movements, active and passive.

6th. A sanitarium may have all the many advantages we have mentioned, and yet be successful only in the class of cases likely to be improved by change and general hygienic surroundings. To be complete, it must have something more.

Sanitariums and *health* or *sanitary resorts* are often confounded. A sanitarium to be worthy of the name, and to maintain a high standard, and hold the confidence of the profession and the patronage of the laity, must have in addition to these sanitary appliances an able corps of medical men.

I have thus far briefly stated the chief distinguishing features of a scientific sanitarium. There are many less important points that will occur to you from your own experience.

Having reviewed the equipments necessary to a remedial institution doing the best work in the treatment of nervous diseases, we will now consider the

Methods of Treatment.

In this list of methods of treatment, I unhesitatingly place first of all—Opportunity. The opportunity of having constant supervision of the patient can hardly be

overestimated. No one can begin to realize the value of this privilege who has not tried both private and institution methods of treatment.

It is valuable in diagnosis. This would imply that in this age of scientific knowledge there were mistakes made. Yes, that is true. It is true in all diseases but particularly in functional nervous diseases. We do not yet know or agree on the exact nature of hysteria. Many cases of hysteria have been treated for organic disease, and many cases of organic disease have been treated for hysteria. I recall a case to point: Mrs. I. J. H., case diagnosed by several of our best nerve specialists as hysteria, and she was treated for years for hysteria. She finally died and the autopsy revealed organic brain disease.

We need all the help we can get in many obscure nervous diseases, not only to diagnose the disease sufficiently to *name* it, but what is often far more important, to be able to study closely and note the differences in individuality and idiosyncrasy and treat it successfully.

Again, this access to the patient frequently enables the physician and attendants to study the treatment and its effects clearly, and decide many points which could be settled in no other way. This opportunity of frequent observation, not only enables the physician to employ a great variety and degree of intensity of treatments, remedies, etc., with perfect safety, but also to note carefully the beneficial results and the changes needed? It may be said that the trained nurse, to a certain extent, supplies this deficiency. A moment's reflection shows that both the means and the opportunity for observation in this latter instance are very limited.

Electricity, subtle, mysterious, powerful, and yet of great utility as a remedial agent, needs no champion. It speaks for itself in the thunder and lightning. It whispers in a million voices at once over the nation.

It breathes its message beneath the ocean. It purifies vast bodies of water for human consumption. It makes wholesome slaughter of germs, the enemies of our race. It lights our homes; runs our trains; propels our street cars; lifts our elevators; in short, vitalizes our entire lives. Why should it be less potent in restoring degenerated bodies? It is not. Electricity—galvanic, faradic, and static—in all the variety of currents, has taken its place in the front rank of therapeutic measures. No nerve specialist, gynecologist or even general practitioner, can afford to ignore its merits, or sacrifice its therapeutic value. That it must be a potent factor in the treatment of nervous diseases in sanitariums will be taken for granted. There are, however, three serious difficulties in the general use of electricity:

1. Expensiveness of the apparatus.

2. The difficulty of obtaining thoroughly trained assistants; for I take it that there are few gentlemen here who have time to apply it to more than some of the most important cases in their practice. I have had any amount of trouble in training physicians, both male and female, in the use of electric batteries, and the Apostoli method of treatment. It requires a certain amount of practical skill. I know a non-professional woman who has acquired great skill and success.

3. Constant supervision. Two apparently identical cases with the same disease, be it hysteria, eczema, locomotor ataxia or neurasthenia are not affected in the same way by the same bath or treatment. Neither is an individual affected in the same way on different days. Constant supervision is the price of success.

The general consensus of opinion is strongly in favor of all the various methods of improving nutrition, the circulation, and the tone of the nervous system by massage, Swedish movements, and the endless variety of machinery for exercising, toning and improving the nutrition of the whole body. Here again we are met by the same difficulties; we find in the use of electrotherapy

the need of expert assistants and vigilant supervision. For instance, these measures are very effectual in relieving rheumatism, circulatory defects, and nervous troubles; and yet they must be carefully administered, for if overdone, they are liable to cause nervous excitement, insomnia, or acute attacks of rheumatism.

While it is not necessary in the employment of drugs to have this constant observation, yet it is of special benefit in the use of many of the newer and more powerful drugs.

No one will dispute the fact that these same lines of argument on the value of constant observation apply to the question of the remedial benefit to be derived from rest treatment. Originating in Sweden, or perhaps in the far East in the remote times, it has had many modifications, and experience has furnished abundant proof that each case should be studied by itself, and treated on its own merits, adapting the amount of rest, seclusion and exercise to the strength and condition of each patient rather than following some routine system.

All I have said about the great value of, and the difficulties in the way of, the scientific and successful employment of these special remedial measures, applies with equal or even greater force, when we come to the use of hydrotherapy. I have purposely left this until the last that I might consider it more fully. Though long known and its real merits understood by a few, yet the general appreciation of the value of hydrotherapy has only been realized in the past few years. It is like the operation known as "Symphiseotomy," which was highly esteemed and practiced in Italy for twenty years before other nations began to appreciate its value. It is the popular operation now. Such classic works as Dr. Baruch's on "Hydrotherapy," put it on a scientific basis. In hydrotherapeutics we have a mighty power for good or harm; and to be used successfully it requires:

1. Extensive and complete apparatus.

2. Skilled assistants.

3. Careful and continuous supervision.

This opportunity to note closely the effect on each individual case, multiplies greatly the exceptions to many of the established rules of practice. I have recently had two cases of eczema extending over more or less of the body. The established rule is to avoid water in most cases of eczema, at least in the acute form. These seemed to me to be suitable cases for baths. I tried them cautiously with frequent modifications. Both cases entirely recovered. One of the cases was complicated with diabetes and the amount of sugar was twenty-one grains to the ounce. The ordinary remedies were used in connection with bath. This latter case had been for months under two of the best physicians in Canada, who had applied the same line of remedies and applications without success. The other case had been in New York. In both I recognized a distinctly nervous element.

I have said that a thoroughly equipped sanitarium or private hospital should have, if possible, some good mineral springs to supply the water both for external and internal use. The positive value of spring waters of merit is becoming more apparent to the profession every year. The relation of hydrotherapy to disease, more particularly nervous disease, is a subject still in its infancy.

There should be pure spring water free from any possible source of contamination.

There should be, when possible, water for internal purposes, that is alterative, laxative and diuretic.

There is also great advantage in having an alkaline water for bathing to neutralize the acidity so often found in connection with nervous diseases, and acting as an exciting cause.

While these waters for bathing are an important element in treatment, yet an equally vital one is the use of them internally. In the successful management

of nervous diseases a free use of water is an essential *remedy*. I would emphasize this statement. England's distinguished therapeutist, T. Lauder Brunton, has dignified water with the title of a "remedy." *Savants* in other countries have recognized its value as a remedy. There are also eminent men in America who appreciate the high position it occupies in the treatment of this class of diseases. I might mention the illustrious names of Meiggs, Seguin, Ranney, Leuf and Salisbury. These and others have referred to the value of water in the treatment of nervous diseases, but like many great truths, important discoveries, or beneficial operations, the facts have not been generally accepted or applied. I am under the strongest conviction that this fundamental principle in the treatment of a large class of nervous, as well as other diseases, is not understood by the general profession, and not at all appreciated by the laity. You may ask what have the laity to do with this subject? I answer, the laity are the subjects and they do the *drinking*, and unless we can impress upon their minds clearly the *rationale* of its use and value, they will not employ it faithfully. Water is such a *common* remedy, they will follow it for a little while, and then drop it. And here is one of the special advantages of treating these cases in sanitariums and private hospitals where the means are at hand, where the importance can be impressed upon the patient frequently, and where constant supervising will detect any marked variation from directions. When we remember that over seventy per cent. of the human body is composed of water, it is easy to see that with a deficiency of this element, health cannot be maintained, and without this essential element in sufficient quantity, any deviation from health cannot be corrected. We might as well expect to run an engine without steam, a fire without fuel, or a water-wheel without a mill race, as to expect the skin, the glands, the kidneys, in short the human economy, to go on performing its daily functions, and either maintaining health, or

restoring it when defective, without an abundant supply of pure water, the largest constituent of the body.

It is an established fact that the better the nerves are coated, other things being equal, the less irritable and more natural is the whole nervous system.

I have been making experiments in chronic nervous diseases with the object of testing the remedial value of the internal use of water, either pure or medicinal, according to the associated conditions. These experiments include four hundred carefully tabulated cases, aside from many more cases of which no complete record was kept. These experiments extend over a period of ten years. My plan was to take two sets of ten patients each, as nearly alike as possible, then to give each set of cases the most careful and approved care, making no change in the amount of water used by one set, but prescribed a marked increase in the amount of water drunk by the other set, and *knowing* that it was *faithfully* taken. The average increase in weight and general improvement in the set which used water freely was very much above the other set. These experiments were repeated so many times and with such care and close observation that there could be no question as to their scientific and intrinsic value. Definiteness and precision in prescribing, and constant watchfulness in seeing that directions are carried out are essential to success.

In the mystery of the value of water often lies the unexplained secret of the decided benefit frequently derived in nervous disease, cystitis and constipation from a sojourn at mineral springs, and during a course of rest treatment in which large quantities of milk are employed. If you will describe to me a person who is nervous, who is irritable and out of sorts with the world generally—has dyspepsia and constipation—is sallow and has a bad taste in the mouth, has headache and does not sleep well, is troubled with bad dreams, often occupied in disposing of his relatives, has depression of spirits, is thin and has

a hungry look, I will prove to you that such a man is a deficient water drinker.

On the other hand, describe to me another man who is not nervous or irritable, who is in harmony with his environments, is good-natured and not a pessimist, has good digestion, does not have headache or constipation, who sleeps well and dreams little, and if so, chiefly of angels and banquets—who is in good flesh and has the appearance of being well fed,—show me such a person, and I can assure you without further evidence that he is a good water drinker.

I need not remind the members of this scientific body how often they have cases under their care, which they know they could cure if they had the time and facilities for employing under their own eye by trained assistants, more or less of the various means I have described in this paper, but it is quite impracticable in private practice. We all know what valuable aids to the efficacy of drugs, in the relief and cure of disease, are all these assistants—electrotherapy, hydrotherapy, massage, manipulations and mechanical appliances. Rest and nutrition adapted to the need of each individual case; but how are we to obtain them, and under hygienic conditions calculated to insure satisfactory results.

It seems to me, as the result of many years' experience that it can only be done by combining in one plant all the necessary means, as in a private hospital or sanitarium. If the length of this paper permitted, it would be gratifying to add many clinical reports in support of the principles herein set forth, but as it is not, I will close with one more point, viz.:

The value of moral treatment in nervous diseases in an institution with the facilities described. It is a settled fact that it is difficult and often impossible to say where nervousness ends, and mental aberration begins. Dr. Hammond puts the per cent. at five out of six in ordinary life.

These border cases are most successfully treated in

these institutions. This moral treatment is essential to recovery. It is necessary to prevent nervous persons from introspection, to provide occupation and diversion, to avoid their dwelling on and discussing their troubles, and to prevent their forming incorrect and exaggerated notions about themselves, and the relative value of their symptoms and treatment. I am certain, gentlemen, that these patients can be kept better balanced, can be lifted out of their fancies and make much more rapid and permanent improvement when under these combined influences of occupation, variety of treatment, moral discipline and support, and constant supervision in a cheerful home-like institution. I have frequently tested these principles in private practice, and under this combined method, and I fully believe that the day is not far distant when the private practitioner, the specialist, and the sanitarium staff will be mutually helpful each to the other.

INSANITY IN CHILDREN.*

By Harriet C. B. Alexander, A. B., M. D., Chicago,

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THE career of the modelly trained moral imbecile, "Gradgrind," is an apt illustration of the results of a bad system. His case is one of the extreme consequences of school over-pressure in which the struggle for marks before maturity more than equals in fierceness and intensity the struggle for gold after it. In certain respects this school over-pressure checks, even in well-developed minds, the transition from the terror of the unknown of childhood into the calm of maturity. Many morbid fears, imperative conceptions and acts, which torture the individual during an otherwise healthy career, unquestionably originate in the early periods of life. The physical basis of these is resultant malnutrition. Dr. Francis Warner,† discussing the effects of school training, on children, remarks:

It is very common to see disordered conditions of the nervous system in children with defective construction of body, but these nerve disturbances may also be seen in children with normal construction of body. Such signs would appear to result from the disorder produced by special circumstances rather than the mere defect in original construction. Among the signs of fatigue in children is the slight amount of force expended in movement, often with asymmetry of balance in the body. The fatigued centers may be unequally exhausted; spontaneous finger twitches, like those of younger children may be seen and slight movements may be excited by noises. The head is often held on one side. The arms when extended are not held horizontally. Usually the left is lower. The face is no evidence of bodily nutrition. It may be well nourished yet the body be thin. Three per cent. of the children seen in school are below par in nutrition. These children are of lower general constitutional power and tend to an ill nourished condition under the stress of life and the many causes of

* Concluded from July Alienist and Neurologist, 1893.

† *Review of Insanity and Nervous Diseases*, June, 1892.

mental excitement which, while they render them sharper mentally, militate against general nutrition.

Damaging therefore as school over-training is to the normal child, the effect on the neuropathic is still greater. More than three-quarters of a century ago a pioneer American alienist, Dr. George Parkman,* said that in this class of patients,

> From puberty, brilliant talents, astonishing facility of receiving and communicating ideas often appear suddenly, especially in females, followed by mediocrity, disappointment and supineness.

The class thus early recognized were persons of "insane" diathesis or "insane temperament;" a congenital condition graphically portrayed by Dr. C. F. Folsom:†

> It is closely allied to insanity and the neuroses, and at the critical periods of life is exceedingly apt to develop into one of them. It is congenital or due to early interference with normal brain development It shows itself in childhood and infancy by irregularity or disturbed sleep, irritability, apprehension, strange ideas, great sensitiveness to external impressions, high temperature, delirium or convulsions from slight causes, disagreeable dreams and visions, romancing, intense feeling, periodic headache, muscular twitching, capricious appetite and great intolerance of stimulants and narcotics. At puberty developmental anomalies are often observed in girls and not seldom perverted sexual instincts in both sexes. During adolescence there are often excessive shyness or bravado, always introspection and self-consciousness and sometimes abeyance or absence of the sexual instinct which, however, is frequently of extraordinary intensity. The imitative and imaginative faculties may be quick. The affections or emotions are strong. Vehement dislikes are formed and intense personal attachments result in extraordinary friendships which not seldom swing around suddenly into bitter enmity or indifference. The passions are unduly a force in the charact r which is said to lack will-power. The individual's higher brain centers are not well inhibited and he dashes about like a ship without a rudder, fairly well if the winds be fair and the seas calm, but dependent on the elements for the character and time of the final wreck. Invention, poetry, music, artistic taste, philanthropy, intensity and originality are sometimes of a high order among these persons but desultory, halt finished work and shiftlessness are much more common. With many of them concentrated, sustained effort is impossible and attempts to keep them to it are impossible. Their common sense perception of the relations of life, executive or business faculty and judgment, are

* "Illustrations of Insanity," 1817.

† "Pepper's System of Medicine."

seldom well developed. The memory is now and then phenomenal. They are apt to be self-conscious, egotistic, suspicious, and morbidly conscientious. They easily become victims of insomnia, neurasthenic, hypochondriacal, neurotic, hysterical or insane, and they offend against the proprieties of life or commit crimes with less cause or provocation than other persons.

At the same time that many of them are among the most gifted and attractive people in their community, the majority are otherwise and possess an uncommon capacity for making fools of themselves, being a nuisance to their friends and of little use to the world. * * * If such children could be placed in the hands of judicious and experienced physicians much better results could be obtained and the downward tendency might be stopped.

Dr. F. M. Turnbull* forcibly and logically insists on the importance of mental training at home and selection of studies and books:

In many cases a child is much better to be kept at home from school, especially where the parents, by their example and conversation, are a means of education, for as a child is impressible and imitative to a wonderful degree, and oftentimes very observant, its manners and language become the same as its associates. In school ungrammatical expression, vulgarisms and wickedness are rapidly acquired from other children, and it is hard to eradicate the impressions make at this period.

G. H. Lewes states:

One thing, however, he (Goethe) did learn at school, and that was disgust at schools. The boy carefully trained at home, morally as well as physically, had to mingle with school-boys who were, what most school-boys are, dirty, rebellious, cruel, low in their tastes and habits.

The child who inherits a strong moral sense and that stability of character which is to enable him in time to become a social being, and to mould his surrounding circumstances for his own and his fellow-creatures' ultimate good, will come through this ordeal with only scars upon his mental and moral faculties, and may be benefitted by the battle, as it will give him greater self-reliance, and there is the stimulus of competition, too; but even here the scars and stains remain, verifying the saying that he who touches pitch shall be defiled.

With a child who is not thus fortunately born, and has some slight immoral tendency, or has inherited a too pliable character, an emotional and passionate nature without corresponding self-control, or the insane temperament itself, to which such a nature leads, the wound may be irreparable, and in some moment of weakness may be fatal to the preservation of a moral sense and self-control. Parents who feel their incapacity to decide whether 'tis better for their children to stay at home or go to school, should submit the question to some person in whose judgment

**Journal of Nervous and Mental Disease*, 1882.

they have confidence, for it may be that the home influence is not the best that can be had. If every boy or girl were surrounded by such influence as Goethe's childhood was, we would not need to hesitate.

The mother of Goethe employed her faculty of story-telling to his and her own delight. "Air, fire, earth and water I represented under the form of princesses, and to all natural phenomena I gave a meaning, in which I almost believe more fervently than my little hearers. As we thought of paths which led from star to star, and that we should one day inhabit the stars, and thought of the great spirits we should meet there, I was as eager for the hours of story-telling as the children themselves, I was quite curious about the future course of my own improvisation, and any invitation which interrupted these evenings was disagreeable. There I sat and there Wolfgang held me with his large black eyes; and when the fate of one of his favorites was not according to his fancy, I saw the angry veins swell on his temples, I saw him repress his tears. He often burst in with, 'But, mother, the princess won't marry the nasty tailor, even if he does kill the giant.' And when I made a pause for the night, promising to continue it on the morrow, I was certain that he would in the meantime think it out for himself, and so he often stimulated my imagination. When I turned the story according to his plan, and told him that he had found out the *denouement*, then he was all fire and flame, and one could see his little heart beating underneath his dress. His grandmother, who made a great pet of him, was the confidante of all his ideas as to how the story would turn out, and as she reported these to me, and I turned the story according to these hints, there was a little diplomatic secrecy between us which we never disclosed. I had the pleasure of continuing my story to the delight and astonishment of my hearers, and Wolfgang saw with glowing eyes the fulfillment of his own conceptions, and listened with enthusiastic applause.

"What a charming glimpse," remarks Lewes (Life of Goethe), "of mother and son!"

Turnbull shows himself a deeper psychologist than Lewes, when he remarks that:

The mother's admirable method of cultivating the inventive activity of the boy, finds its pendant in the father's method of cultivating his perceptive faculties. Goethe speaks with less approbation than it deserved of his father's ideas of education, probably because late in life he felt keenly the deficiencies of systematic training. But the principle upon which his father proceeded was an excellent one, that of exercising the intellect rather than the memory.

Children should be taught self denial, that they may be the better able to bear misfortunes and disappointments that are to come later in life, and which, if they have not the philosophical spirit and a persistent optimistic habit, may be the exciting cause of their mental ruin.

A selfish egotism is one of the peculiar traits of character which is

most noticeable in the insane; a constant introspection; their symptoms, their miseries, or their imaginary grandeur, etc., are the all-absorbing themes with many of them.

Egotism often manifests itself, in various degrees, in children as well as adults, in the form of self-consciousness or morbid sensitiveness or pure selfishness; and all these should be combated as dangerous tendencies and as indications, when marked, of the insane temperament. Self-consciousness can be lessened, if not overcome, by avoiding all conversation and personal remarks about children in their presence, and by awakening their interest in anything which will cause them to forget themselves in the presence of others. Morbid sensitiveness should be overcome, first, by kind treatment, persistent admonitions, and by discouraging all belief in fancied slights or injuries, and by teaching that, in in this respect, "where ignorance is bliss 'tis folly to be wise." They should be taught self-control, to curb their passions and vicious impulses, as these lead to insanity and crime.

The reading of boys and girls should have a careful supervision. Dime novels and such sensational literary trash as some illustrated papers; the sickly sentimentalism of such magazines sold on every news stall or railroad train, and even found in the houses of intelligent people, should be forbidden fruit.

Many a boy or girl receives an education as much from reading out of school as from the prescribed outline of study, and the midnight oil is burned over tales of villany and passion, or some vapid story of a hysterical girl and an impossible man who adores her in a ridiculous manner.

Boys and girls should know nothing of love until they are old enough to experience it, and should not have their minds prepared by their reading for elopements and foolish marriages and a defiance of good advice from their fathers, whom they have invested with the attributes of the traditional stern and tyrannical parent. Instead of all this morbid excitement of the emotional nature they should be induced to read what would be a benefit and a delightful mental resource in after life,—the tales of Grecian mythology, the poems of Homer and other classics, the classical literature of mediæval and modern times, history, lives of great men, popularized science, tales of adventure, if you please, but such as would afford them knowledge of the world, its creatures, and natural phenomena, as, for instance, Robinson Crusoe, Jules Verne, etc. If children can memorize nursery rhymes and such poems as the "Ride of St. Nicholas," why should they not memorize Shakespeare, Spenser, Bryant, Tennyson, Longfellow, or Whittier, and have something to think of when grown up, alone, and thrown upon their own resources for amusement. The memory can be cultivated to a certain extent in this way without injury. Of course there must be care and moderation, especially with nervous and precocious children, as in all else. The excitement of children by religious revivals should be avoided, and in fact they are pernicious at any age.

Turnbull leans, however, too much to the cloister theory. Home life should arm the child for the struggle of existence, not shut it out of the struggle.

Dr Mary Putnam-Jacobi,* discussing the "prophylaxis of insanity," clinches her argument for proper prophylaxis in childhood by the following citation from Krafft-Ebing:

> In neuropathic families the children early manifest a remarkable nervous excitability, with tendency to severe neurotic disorders at physiological crises, as convulsions during dentition, neuralgias at menstruation. The establishment of menstruation is often premature, often preceded and followed by profound chloro-anæmia. The cerebral functions are easily disturbed, slight physical disorders being attended by somnolence, delirium, hallucinations. The nervous system seems to be everywhere hyperæsthetic. Reaction to either pleasing or displeasing impressions is excessive; there are abundant reflex neuralgias, vasomotor irritations. Pallor, blushing, palpitations, præcordial anxiety, are caused by trifling moral excitement or by agents lowering the tone of the vasomotor nerves, as heat or alcohol.
>
> The sexual instincts are precocious and often perverted. The establishment of puberty is often the sign for the development of spinal irritation, hysteria or epilepsy. The psychic characteristics correspond. The disposition is strikingly irritable and touchy; psychic pain arises for trifling cause; at the least occasion the most vivid emotions are excited. The subjects of this temperament alternate rapidly from one extreme to the other. Their sympathies and antipathies are alike intense; their entire life is passed between periods of exaltation and depression, leaving scarcely any room for healthy indifference. On the other hand there is a remarkable inexcitability of ethical feeling. Vanity, egotism, and a jealous suspiciousness are common; and the temper is often violent. The mind is often obviously feeble, with few and monotonous ideas, and sluggish association of them. At other times ideas are readily excited; the imagination is active even to the production of hallucinations; but mental activity is ineffective, because of the rapidity with which it leads to exhaustion. There is no time to complete anything before the energies flag. The will is equally deceptive in its apparent exuberance and real futility. Its capricious energy and innate weakness is a fit counterpart for the one-sided talent or even whimsical genius which often marks the intelligence.

Dr. Putnam-Jacobi, starting from this stand-point, draws the sound conclusion that the utmost care is to be exercised in the training of such children.

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* "Archives of Medicine," Vol. I.

Maudsley emphasizes this very point thus:

Those who have had much to do with the treatment of insane persons have not failed to note the marked mental peculiarities of their near relations in many instances, and to lament that they oftentimes show themselves more distrustful, more difficult to reason with, more impracticable, than the member of the family who is confessedly insane. In the first place, they have such an intimate radical sympathy of nature with those tendencies of character which have culminated in insanity in them. Parents, who, having themselves a weak strain in their nature, have given their children the heritage of a morbid bias of mind, are very apt unwittingly to foster its unhealthy development; they sympathize so essentially with it that they do not perceive its vicious character—if they do not actually admire it—and leave it to grow unchecked by a wise discipline or perhaps stimulate it by the force of a bad example. "He is so spoiled," says the silly mother placidly of her child, as though she was saying something creditable to it, or at any rate that was not very discreditable to her, little thinking of the terrible meaning of the words, and of the awful calamity which a spoiled life may be.

Among those beings termed by him the "neurotics," Dr. E. S. Talbot* has found anomalies of the jaws and teeth exceedingly frequent. Such stigmata of degeneracy were to be expected. The lithæmic child, of pædiatrists, belongs but too often to this class, the lithæmia being an expression of degeneracy.

Here, also, very often belong the infant prodigies like the two-year-old negro calculator described by Dr. S. V. Clevenger,† and the host cited by Moreau de Tours. Such precocity is a mental stigmata and, like early puberty, appears so often among the degenerate as to give rise to the proverb, "A wit of ten is a fool at thirty." Shelley is an excellent instance of this "insane temperament."

He was somnambulistic from his sixth year.‡ From "very early childhood" he was an imaginative and restless child. Trifles unnoticed by most children, seem to have made keen and permanent impressions upon him—the sound of wind, the leafy whisper of trees, running waters. The imaginative faculties came so early into play that the unconscious desire to create, resulted in the invention of weird tales of

* "Irregularities of the Jaws."

† ALIENIST AND NEUROLOGIST, 1888.

‡ These particulars are from the Lives by Dowden, Sharp, Symonds and Miss Sanborn.

legendary creatures, tales sometimes based on remote fact, in attempted delusion of neighbors and in the experience of more or less positive hallucinations. His memory surprised many of his friends. He delighted in "weird and somber tales of the supernatural and horrible." He was extremely desultory and careless in all his habits. His room was a chaos of scientific instruments, chemicals and books. "From thinking the best of friends and acquaintances he could of a sudden, and with insufficient cause, pass over to the other side and think the worst." Like all neuropathics he was easily hypnotized. He was a great hypochondriac. On one occasion, meeting a woman with large legs, he was seized by the notion that she had elephantiasis and had infected him. Medical examination demonstrated the falsity of this notion, but it persisted for several days. "One evening he actually arrested the dancing of a line of pretty girls, proceeding to examine their arms and necks wth such woebegone gravity that they were terrified and their angry partners silent." He suffered frequently from the topoalgias so frequent in neurasthenics and hypochondriacs. His flagrant violations of social conventionalities were notorious. Many of these, however, had, as Symonds has shown, logical bases from the Shelleyan stand-point of reaction against social tyranny not unnatural to a mind early subjected to the brutal "fagging" of English school-boys and brutality of schoolmasters who found a "voluptuous ecstasy" in flogging boys ere entering on the "feast of reason, flow of soul," of a banquet whereat the flogger was the "genial, humorous" host. Shelley, however, violated his own code in a most capricious manner. An avowed atheist, he took the sacrament in a blatantly audacious manner for interested reasons. He reverted to fetichism and argued for the existence of ghosts. He denounced legal marriage but married Harriet twice; once by the simple Scotch common law ceremony and once by the English Church rite. The constant nagging of his intriguant "sister-in-law," which drove Harriet into "nerves" and him into home hatred, led to the estrangement of wife and husband. The hysteric insensibility of the wife to her own children fostered this. Shelley's temperament, however, aided this tendency. He "took strange caprices, unfounded frights, vain apprehensions and panic terrors, and therefore absented himself from formal and sacred engagements." In a month after the English marriage he deserted Harriet and her unborn child, to elope with Mary Godwin. Even Symonds, the most logically psychological of Shelley's analysts, fails to justify this act from Shelleyan principles. In Shelley's case hereditary degeneracy existed. He normally reacted against school tyranny, hence it alone does not account for the defects and peculiarities of his career.

Koch,* under the title of "Psychopathic Depreciation," includes the cases otherwise described under insane diathesis or insane temperament. He divides these cases

* Cited by Morel, *Amer. Jour. Insanity*, Oct., 1893.

into three classes: Psychopathic predisposition, psychopathic defect and psychopathic degeneration. The first, which may be latent or evident, shows itself in an exaggerated sensibility accompanied with a lack of activity or energy in the nervous system. The cases of psychopathic congenital defect present anomalies of psychical sensibility, exaggerated excitability, irritable weakness, exaggerated egotism, want of balance in the mental faculties, want of uprightness and judgment, inconsistency, eccentricities, singularities, imperative conceptions and periodicity in these symptoms. These are the eccentrics, the half-witted, the overscrupulous, the capricious, the pessimists, redressors of wrongs and professional "reformers." Congenital degeneracy exhibits, among other intellectual deficiency, mental weakness in the intelligence or in the moral sense or in both. The evil influence of ordinary education on these last two types of cases has been pointed out by Tuke, Kerlin, C. K. Mills, Morel and Koch. Dr. C. K. Mills* points out with much force that:

> Some understanding of the subject of moral insanity in children is of great importance to the general practitioner, who is almost invariably first consulted by anxious parents about the unfortunate victims of these disorders. It is probably better that a distinction should be made between moral imbecility and moral insanity in children as well as in adults, although commonly this is not done. The subject of true moral imbecility is the victim of heredity, and his condition is manifested as soon after birth as it is possible to recognize deficiencies in the moral sense through conduct. I have become only too familiar with this class of cases, presenting chiefly moral symptoms, cases which must be recognized as the subjects of disease, and the special care and treatment of which are forced upon us by every scientific and humane consideration. Such children are incorrigible to reproof and training. Punishment has no effect upon them, or only will be heeded to aid their escape from pressing annoyance or discomfort. Much difference of opinion has arisen with regard to the exact nature of such cases. One contention is that a case of pure moral imbecility or moral insanity does not exist, and that close investigation will always show some intellectual disorder. The difference is probably one of terms. Recognizing such words as morality and immorality, as expressing distinct ideas, no reason exists for not speaking of moral departure or moral disease. The doctrine of moral insanity and moral imbecility are, as Tuke claims, in

* *Medical Standard*, Vol. XIV.

full accord with the rules of evolution and dissolution as laid down by Spencer and Hughlings Jackson. Illustrations of moral imbecility could be cited in numbers similar in four cases which have been reported by Kerlin,* the first an illustration of the incipient prostitute, the second the incipient burglar, the third a hereditary religious hypocrite and egotist, and the fourth a confirmed juvenile confidence man.

In moral insanity as distinguished from moral imbecility, the patient has apparently been born in full possession of the so-called moral sense, as well as of intellect. The perversion of the moral affective life has been brought about by injury, disease, or vicious habits. Extraordinary perversions of character have been recorded in considerable number as due to acute fevers in children, as after scarlet fever and malarial fever.

The best method of treating moral imbecility must be sometimes met. In most genuine cases, education and philanthropy, kindness and cruelty, the Sunday School and the reformatory, the asylum and the penitentiary, will equally fail, or perhaps I should not say equally, as in a very few instances, strengthening of the weak and imperfect co-ordinating centers may be impossible. To the typical cases, to the vast majority of cases that would come under this designation, belongs the term incorrigible. Most practical and most experienced authorities, as Hack Tuke† and Kerlin, believe that education in its ordinary meaning should be largely withheld from this class. The former says of them : "The early detection of these cases is not difficult, they should be subject to life-long detention, their existence can be made happy and useful, and they will train into comparative facility and harmlessness if kept under a uniform, temperate and positive restriction. The schoolroom fosters the ills we would cure; in teaching them to write we give them an illimitable power of mischief, in educating them at all except to do physical work, we are adding to their armament of deception and misdemeanor." As Kerlin puts it, we should refuse them the ordinary routine of education because "we believe that in educating moral imbeciles we are training experts for the later rôle of so-called moral insanity."

The treatment of the psychopathic offsprings of degenerate parents is one of the most serious problems which confront the physician. Although the parents may be convinced of the necessity for the extreme caution in the rearing of their children, their inhibitions are too weak to carry out the treatment decided upon. In complete separation is the only hope of ever accomplishing anything by the training of the weak inhibitions of the

* Kerlin: *Medical News*, March 19, 1887, pages 326-327.

† "Dictionary Psychological Medicine."

degenerate and this course is practically impossible. Degenerate mothers are excessively fond of their children after a maudlin fashion, and their egotism causes them to think themselves model mothers. I have had such a mother's consent to turn over entirely the training of her child to a person recommended by me, and yet at the first attempt of the companion to exercise authority over the child, the mother told the child to do as it pleased. These children need a nourishing, stimulating diet, an outdoor life, regular hours and regular employment; in fact, they require the very life which is led by the healthy children of healthy parents, but which they rarely get unless one of the parents happens to be of sound mind and strong will and financially circumstanced to control the surroundings of the children. Jules Morel* has urged the passage of a law forfeiting parental control on account of incapacity and unworthiness. Such a law is perfectly compatible with the common law of English-speaking countries. Indeed this very principle is often acted on in cases of cruelty or in divorce cases. Morel and Koch both agree that the sense organs of many of the degenerates have but the slightest education. The educator has to know this; it is of the greatest importance. He must study these senses systematically, and the degree of their functions. When necessary he has to classify his charges according to the extent of their degeneracy. The interference of the educator should be slow and prudent and the natural disposition and powers carefully studied. Morel, Koch and Kerlin have urged the great need of special schools for these classes. The piteous picture of the sufferings of Maria Bronte ("Miss Burns") in the school of "Jane Eyre," might well create the indignant joy of Charlotte Bronte's biographer that "the savage rites of the school-room which had so moved the indignation of Montaigne, have just ceased to disgrace England." Maria's mind and physique perished under the school strain. Her fate was happiness

* *American Journal of Insanity*, Oct. 1893.

itself compared with that of Branwell Bronte, who with a very limited one-sided poetical genius, developed, under the pushing given to seeming precocity, into the sneaking moral imbecile of the family. Charlotte Bronte's seemingly limited mental qualities saved her from the fate either of her brother or her sister. Fanny Burnett was saved from a like fate by her seeming dullness and the good sense of her mother. The "precocious genius" of the rest of her family vanished early.

The acquired psychopathy, while often dependent on a predisposition, hereditary or otherwise, may occur in sound children.

Dr. W. S. Christopher, in a paper recently read before the Chicago Academy of Medicine, has laid stress on the nutritional influences, active in the production of neuroses underlying psychic states, and these deserve more attention than they have received.

Beside hereditary and the other predisposing causes cited already, Dr. Welt very correctly has said that the etiological factors in the production of mental disturbances in children are injuries of the head, either during parturition or later; acute cerebral trouble and abnormal development of the brain; fright, masturbation and infectious diseases may act as predisposing elements. Among the chief exciting causes are the fevers.

Thoré has shown that psychoses following acute diseases are of two classes: the first is met with during the development and the duration of the acute process itself, while the second class is found only during convalescence, or at least during an intermission of the disease. The etiology as well as the course and the issue in these two groups—the febrile and asthenic deliria—differ considerably.

Kraepelin* points out that in pathogeny of the febrile deliria the exciting cause prevails considerably over the predisposition; the causes of the disease are dependent

* *Medical Standard*, Aug., 1893.

upon somatic disturbances. Hence the monotony of the febrile deliria, the short course, and nearly always favorable issue with the disappearance of the etiological cause; on the other hand, the predisposition of the individual forms the most important factor in the development of the asthenic form. The lowered state of the system, depressed by the preceding fever and infection, exhibits itself more when the circulation is retarded during the decline of the fever; and the brain which may have suffered in its vitality by the preceding rise of temperature, is the first organ that reacts on the inadequate supply of blood; besides, there may be an influence of the infectious element upon the central nervous system, either by affecting the ganglionic cells, or indirectly through a change of the blood by the microorganisms. In the deranged equilibrium of the system even slight irritating influences, afforded by the events of daily life and frequently overlooked, may cause mental disturbances. In their course the asthenic psychoses resemble the mental derangements of spontaneous origin, and usually terminate in full recovery; with convalescence and better nutrition brain morbidity disappears. Dr. Sarah Welt advises that as a matter of prophylaxis, children after acute disease, especially when in an anæmic and poor condition, ought not to be allowed to leave the bed too early, and the action of the heart should be carefully controlled. Threatening spells of weakness ought to be prevented by administration of good nourishment and stimulants. In occurrence of deliria strict control of the patient becomes necessary; bed rest and a generous administration of alcoholics and heart stimulants. Against the irritable state of the brain, sedatives in result-giving doses should be used.

Dr. Kiernan states that the psychical manifestations of the febrile stage of any disorder are usually an hallucinatory delirium or acute confusional insanity. These may be agreeable in type. With a fall in

temperature occur asthenic psychoses, characterized by visual and auditory hallucinations and their consequences. These are due to acute exhaustion of the nerve-centers succeeding to considerable thermic oscillations. The mental symptoms of the febrile stage may aggravate temperature oscillations and in turn be aggravated.

Spitzka* finds that febrile and other acute disorders sometimes cause serious and incurable insanity, usually combined with more or less arrest of development. This result is most apt to follow when some moral cause, such as a shock, is superadded. From 10 to 30 per cent. of infantile insanity is attributable to the acute diseases of childhood, the overwhelming majority being *sequelæ* of the exanthemata (excluding cases followed by simple imbecility). Scarlatina, measles, typhoid and acute articular rheumatism are most to be dreaded in reference to their immediate mental *sequelæ*. Typhoid is especially deleterious. Nasse classifies the febrile insanities according to their period of development: *a*, coincident with the fever as to time and ranging from delirium to insanity; *b*, developing as an apparent aphasia and dementia. Spitzka found but 7 per cent. of his cases attributable to these causes. This low percentage was due to the fact that he did not include fatal cases nor ephemeral deliria, which in children, as Hughes and McBride† have shown, replace malarial attacks and which are benign, self-limiting and not apt to come under alienistic care, like the more serious and protracted mental complications which may attain pseudo-cretinism. Aside from an infrequent hallucinatory delirium there is a continuation of the specific somatic disorder, so that a true convalescence cannot be said to have existed. This is often associated with hyperthermia; *c*, developing during convalescence. These last, Spitzka‡ is of opinion, are different from the other two, are probably more benign and are anæmic or

* *Amer. Jour. of Neur. and Psych*, 1883.
† *Med. Standard*, Vol. IV, 1888.
‡ "Keating's Cyclopedia."

adynamic. Spitzka states that sudden changes of temperature uncomplicated by other causes can produce transitory frenzy and acute delirious states. This is equally true of the extremes of temperature. Over exposure to the sun and exposure of the unprotected head of an infant to a hot stove have been declared responsible for the same acute delirious or furious outbreaks that Reich observed in children who, after long exposure to severe cold, suddenly entered a warm room. Rapid cure of a maniacal delirium after the expulsion of ascarides in several cases proves, in Spitzka's judgment, that a parasitic etiology has been correctly assigned for these cases. These mental disorders are usually of acute type. The parasites which have their seat low down in the bowel have a less direct relation to mental disturbance when, as in not a few cases, they provoke masturbation by the scratching of the anus they cause, or by wandering into the genital passages. The forms thus produced vary from the precipitation of hebephrenia to a stuporous insanity, or an acute hallucinatory confusional insanity of favorable prognosis.

As to frequency, Dr. Sarah B. Welt* remarks that insanity in the first ten years of life, aside from idiocy, is very rare. Out of ten thousand inhabitants, Emminghaus found in Germany, between the first and fifth years, 0.18 per cent. insane; between the sixth and tenth years, 0.69 per cent.; and between the eleventh and fifteenth years, 1.46 per cent. insane. Debouttville, in France, found among the insane admitted to the asylum in Saint-Yon from 1827 to 1834, 0.9 per cent. between the fifth and ninth years; 8.5 per cent. between the tenth and fourteenth years; and 20 per cent. between the fifteenth and twentieth years. Turnham found but eight children less than ten years of age among 21,333 insane; idiots, who are far more frequent in number, not being included. The most common mental derangement in childhood is idiocy, be it congenital from insufficient

* *New York Medical Journal*, March 18, 1893.

development of the brain, or acquired from previous cerebral disease. Next in frequency is maniacal exaltation, while depression occurs only in late childhood. Insanity in childhood occurs more frequently than is evident from the statistics. As no psychosis in childhood shows the entire complex of symptoms as in adults, it is readily understood that the symptoms of a mentally deranged child may often be taken to be bad behavior, and only the result, mental weakness, will be recognized.

Motor explosions, for reasons already pointed out by Meynert, readily occur in children, whence the fact noted by Dr. Grace Peckham Murray* that neuroses in children tend to be motor rather than sensory, since the reflex arcs of which the motor strands form a part are earliest perfected, so that when a sensory stimulus sets free a nerve energy it is likely to overflow into motor paths. Intellectual comprehension of sensation, and consequently of pain, is the last to be developed; in consequence, severe nervous shocks which would give rise to exquisite pain in the adult, result in a motor neurosis in the child. Motor neuroses, as already stated, readily pass into the motor expressions of psychical disturbance; and from these psychical disturbances intensified by the feeble power of discriminating between the subjective and objective, result the hallucinations so frequently noted in children. The disturbance of the feeble ego results in the appearance in the mental foreground of the child, of cruelty, mendacity, and other primitive instincts. Abulic speech, as Dr. T. H. Kellogg† has shown, may occur in the instinctive insanities of childhood from morbid tendencies to commit improprieties of speech. The neuroses, properly so-called, are beyond the scope of this article. All of them may be accompanied by psychical symptoms. Hysteria, convulsions, ecstasy and chorea may occur in epidemic form, especially during religious revivals.

* *Journal of Nervous and Mental Disease*, 1884.

† *Amer. Journal of Insanity*, 1892-3.

The child crusades were mixtures of these epidemics with psychical ones.

Epilepsy and hysteria in childhood as in adult age present their characteristic mental phenomena. Extreme cruelty, as in the case of the boy fiend, Pomeroy, may long be the only manifestations of the epileptic neurosis. In this age it is well to remember that as Griesinger* has shown mental derangement often appears as moderate irritability, persistent or habitual. The child is passionately obstinate, quarrelsome, malignant, and even immorally inclined. Often this mental degradation is dubbed simple wickedness. It may occur as a simple, logical perversion with aimless, errabund tendencies, intellectual and emotional perversion with excitement. These children cannot keep still a moment. They talk incessantly and incoherently, and are very inattentive. There are sometimes longer or shorter attacks of mania. In children of from three to four years attacks of crying, of wild refractoriness, of striking and morbid destructiveness occur. They may alternate with epilepsy, chorea, stupor, ecstatic cataleptoid states (simulating katatonia). The child may remain for hours or days as if quite absorbed, with open eyes, fixed countenance and peculiar position, sometimes breaking out suddenly into loud cries. Hypochondriacal states develop in children of parents morbidly anxious about the health of their offspring.

According to Shaw,† in children the ideas are simple, few and disconnected. They are therefore incoherent because of an absence of organic associations between the residua. The morbid phenomena are not systematized as in the adult, and the result is (according to Maudsley)‡ delirium rather than mania. The morbid idea in the child's mind having little range of action acts downwards (Maudsley) on the sensory ganglia, causing hallucinations or giving rise to morbid impulses. These impulses constitute impulsive insanity, called by

* "Mental Pathology."
† "Manual of Insanity."
‡ "Pathology of the Mind."

Maudsley, monomania, and by Morselli, paranoia rudimentaria impulsiva.

Under the head of monomania Maudsley places the epidemics of morbid ideas which have from time to time in the history of the world affected children. The ruling instinct in a child of three or four is self-gratification, involved in which is a tendency to destroy what it dislikes. Its insanity is manifested by perverse and unreasonable appropriations of whatever it sees, and by extreme destructiveness. It suffers from the instinctive variety of moral insanity. Maudsley describes a cataleptoid type of insanity resembling katatonia.

The instability of childhood is shown in the presence of garrulity, melancholiac depression or excitement, maniacal exaltation of the pleasant deliria type and instinctive tendencies. Exaltation and delirium is usually contemporaneous with the beginning and acme of febrile attacks, while depression usually follows the disease.

The temperature at which delirium begins in a child is, as Clouston has shown, a good index of its brain constitution and temperament. The temperature at which delirium sets in is lower in the sensitive. Such children, independently of temperature, are subject to gusts of unreasonable elevation during which they are quite beside themselves, rushing about wildly, shouting, fighting, not really knowing what they are about; this coming on at intervals like the attacks of disease.

Voisin* finds that insanity may in children be of depressive or excited type. The depression may amount to melancholia attonita. There are also ecstatic states. He claims that the "gusts of temper" just described by Clouston are determined by masturbation. These attacks may last several days. The children present a furious appearance, grind their teeth, tear, bite, run to and fro and roll on the ground. Luys† finds periods of excite-

* "Maladies Mentales."
† "Maladies Mentales."

ment, depression and hallucinated states; ecstatic states occur in epidemic form.

Forbes Winslow* finds that children are liable to transient mental disorder, which passes away without leading to after results. Regis† finds the depressed and excited, as well as the degenerate types, present in childhood.

Scherpf‡ finds that mania of sudden inception and furibund character is the most frequent acute type. Melancholia often orginates in hallucinations and has a tendency to hypochondrical phases. Katatonia may occur. Impulsive monomania, paranonia, periodical insanity, and moral insanity are more frequent than the acute psychoses.

In W. A. Hammond's§ experience the most frequent type of insanity in children is mania, but insanity in children may occur as an affection mainly of the emotions or as characterized by blind and unreasoning impulses to deceit or violence. Fixed delusions are not a prominent feature, but there are perverted feelings, indecency, destructiveness, malignancy toward relatives and hallucinations.

Kiernan‖ agrees substantially with Clouston and Griesinger, but has noticed that hallucinatory types are relatively frequent. Hecker, Kerlin and Kohler find hereditary types of insanity in children marked by disagreeable variable temper, irritability, lack of self-control, morbid egotism, and often one-sided talent, ideas of persecution at times, with impulsive and immoral tendencies.

Kirchoff¶ finds that children whose ancestors have suffered from psychoses or neuroses, not alone become delirious from slight causes, such as digestive disturbances, slight fever, teething, etc., but are apt to be

* "The Brain and Mind."
† "Maladies Mentales."
‡ Jahr. f. Kinderhl. 1883.
§ "Treatise on Insanity."
‖ *American Lancet*, Vol. VII.
¶ "Handbook."

depressed for a long time after the ordinary disagreeable events of daily life. Mental work at school rapidly exhausts them. Fright and punishment excite them to a dangerous degree.

According to Moreau de Tours, circular and periodical insanity in childhood resembles in all essential particulars the same psychosis in the adult.

Pottier* insists that persecutional delusional paranoiacs present special characters in childhood. They are wild, unsociable, inclined to solitude and isolation, somber and taciturn, defiant and suspicious, living apart from their comrades, regarding these last as scoffers, and already interpreting to their disadvantage the most insignificant event. Such a delusional state may of course have the usual forensic results.

Dr. C. K. Mills,† of Philadelphia, states that:

> Mental disease in childhood is, as a rule, limited to a few forms, and a little consideration will show that this might be expected; as for the full development of certain types of insanity it is requisite that the faculties of the mind should themselves be evolved to a certain point. In a strict sense, the existence of mental disease presumes the previous presence of mind; hence some would exclude from insanity proper, idiocy and imbecility due to congenital structural defect, although for practical purposes this is not necessary, as mentality is supposed to be the inherent attribute to the race. Paranoia, or primary delusional insanity, will not in its typical forms be observed in children under puberty, but abortive or imperfectly developed paranoia is not an uncommon juvenile affection. * * * Some children are pursued and worried with imperative conceptions, insistent ideas, and morbid impulses and propensities; and, after all, these are but delusions in the making.
>
> The varieties of true insanity most commonly observed in children are, (1) melancholia; (2) mania; (3) choreic insanity; (4) hysterical insanity; (5) cataleptic insanity or cataleptoid insanity; (6) epileptic insanity; (7) moral insanity and (8) certain quasi-insanities—forms of morbid fear and of morbid doubt, perversion and impulse. So-called etiological varieties of insanity in children, as dementia occur, due to inherited syphilis, febrile and post-febrile reflex and masturbational insanity; but these and other classes founded on causation, may according to inclination or stand-point be regarded as forms of insanity, or as groupings of cases which indicate simply the important causes of some of the clinico-pathological types.

* "Thèse de Paris," 1886.

† *Medical Standard*, Vol. XIV.

* * * It is always necessary to distinguish between monomanias or paranoias and melancholias; but genuine, uncomplicated melancholia is undoubtedly seen in children. Sometimes hallucinations are present with the mental depression and sometimes not. Melancholia in a child seldoms assumes the extreme form which is so frequently observed in the adult; but now and then a true agitated melancholia or melancholic frenzy is observed. Ordinarily a child suffering from melancholia will be blue, sad, anxious, weeping, restless by day and by night, and wanting in the liveliness and changeability of children.

Morbid jealousy may present itself at an early age and exercise a decidedly deleterious influence on the heart of the child. Love, according to Descuret, explains the passionate attachment often displayed by little girls for dolls. In the degenerate, romantic love may occur early. Byron at the age of eight was passionately in love with Mary Duff, a little girl of ten. The news of her marriage eight years later caused convulsive attacks. Alfieri and Dante were similarly in love at nine years. Such early love must be regarded as morbid and an expression of degeneracy like precocity and early puberty. In the cases reported, other evidences of degeneracy existed. Like all precocity it needs restraint, not assistance. Pathological anger is exceedingly frequent in childhood. Imperative conceptions of all types occur. Dr. King* has observed pyrophobia in a boy of six, who doused all fire with water. Agorophobia, mysophobia, clitrophobia, etc., also are relatively frequent.

Dr. Hurd† cites a history of such conceptions, written by the patient herself. When about twelve years old, she began to have strange fancies, as fearing that the blood flowing from a cut finger would harm those who came near her. Later, dressing, walking out of doors, eating, were all greatly interfered with through the same morbid ideas. She feared contagious disease because she might communicate it to others. The insistent idea changed from time to time, but seemed to spring almost from the emotion of fear.

* Alienist and Neurologist, 1881.

† "Eastern Michigan Asylum Reports," 1885-6.

The discussion of the "imperative acts" following imperative conceptions involves many mixed states closely bordering on delusional conditions, from childhood's instability with regard to the difference between the subjective and the objective.

With the increasing social tendency to expose children to financial and other mental stress at the critical period antecedent to puberty, suicides, insanity and criminality among children must, in the nature of things, increase. In evidence of this, Moreau de Tours gives the following table:

Years 15	14	13	12	11	10	9	8	7	Total
1861-65—63	29	28	11	6	3	0	1	0	141
1866-70—73	46	25	7	9	3	2	0	1	166
1871-75—67	42	22	21	11	5	3	3	1	175
203	117	75	39	26	11	5	4	2	482

In the last ten years forty-two boys and fifteen girls attempted suicide in Russia. In the fourteen months ending December, 1891, sixty-two children committed suicide in Berlin, Germany. The youngest had not reached the age of seven. The percentage there is higher for the same reason which will increase it here; the increase of school over-pressure. The exciting cause of the suicide is usually a trivial one. One boy killed himself to get rid of "so much dressing and undressing." No less than five attempts at suicide were made during 1887, by children under fourteen years of age, resident in a Philadelphia district less than a mile square. In three cases the attempts were successful. In three of the five cases the moral epidemic nature of suicide was shown in the fact that one suicide was an exciting cause of two suicides and one attempt. In all five cases, the approach of puberty had produced its usual emotional disturbance. The immediate causes were, as in most child suicides, trival. Hanging was the favorite method, although one girl (who seems to have formed the melancholiac delusion that she had hanged one playmate who

committed suicide) took laudanum. She recovered from the poisoning and the melancholia. St. Louis has recently had a very similar epidemic. Griesinger states that 6.10 per cent. of the suicides in England are of children under ten years. Death does not inspire children with the same fear it does the majority of adults, and the weak ego is easily overcome by the dominant idea of suicide.

In dealing with the question of homicide it should be remembered, as Clifford Albutt* points out, that in children homicide is, as a rule, an unreflective act. The act is in all probability imitative as a rule. The child has heard of killing and of death but has no clear perception by reflection of their meaning. Homicide by negro children is growing far from rare. In two instances in 1892 two ten-year-old negro boys killed a baby brother to get rid of the trouble of minding it. Moral imbecility may crop out here and in cruelty to animals. Moreau de Tours cites a case in which a four-year-old boy chopped at the face of a ten-months-old nursling. Esquirol has observed a prematurely nubile girl of eight years who had a fixed tendency to kill her stepmother. Legrand du Saulle reports the case of a five-year-old boy addicted to masturbation from his third year who had long been noticed by his nurse to be wicked and vicious, who loved to torment younger children. He liked to see chickens killed; ordinarily stupid, his intelligence was shown only in mischief. Having noticed nose-bleed follow the fall of his baby brother he felt an intense desire to see blood flow. Profiting by the absence of the nurse he flung the baby down from a table. Epistaxis resulted and he rubbed his hands gleefully in blood. With complete indifference he answered in reply to all questions that the nose-bleed amused him and he would repeat the deed.

This was also excellently illustrated in one of my cases.

* "Tuke's Psychological Dictionary."

The eight-year-old daughter of a hystero-epileptic presented many of the symptoms of degeneracy. Intensely cruel she took delight in torturing those of a weaker nature than herself. She was constantly calling the attention of a melancholiac to the screen in her window. She knew how to induce the hysterical attacks of her mother and delighted in seeing the attacks although afraid of her mother at that time. She delighted in the sight of blood. She was a somnambulist. Imperative conceptions had been demonstrably present for more than a year. Like so many of these degenerates she had an intense appetite for meat.

The crimes of Pomeroy, the "boy fiend" of Massachusetts, who killed and tortured several small children, were later explained by the appearance of epilepsy, and other cases of children homicides have had like explanations. The impulsive type can, of course, occur without epilepsy since the feeble "ego" of the child is as easily overcome by the homicidal as by the suicidal impulse.

Arson results as (Legrand du Saulle remarks) in maniacal, emotional and depressional states, in dements, imbeciles and idiots. It may also develop in girls ere puberty or as Marc has said, in child servants badly treated by masters and desirous of re-entering under the parental roof. Nostalgia results. Fire and flames are found to relieve this, whence arson. Rape may occur from early precocity in both sexes in the degenerate. Thefts often occur from the same feebleness of the ego which results in homicide and suicide.

In regard to treatment of these states Jules Morel well says it is an imperative duty to fight from the first, against symptoms of predisposing and occasional causes, because if aggravation be prevented, recovery is made possible. The ancestral surroundings of neuropaths are admittedly unadapted for training and treatment even of neurasthenics and hysterics. Yet very charlatanlike cant is used to flatter relatives. I was called to a case of senile insanity and had been warning the members of the family, in which there were four married daughters who all had children (the family history being bad), about the care of

the children. An "alienist" was called into the case. When the daughters questioned him about the matter he replied: "Oh, no, there is no danger; you need not take extreme care of your children. It is only the strong-minded who get insane any way." I lost my hold on that family. Such rant is worse than erroneous. It has the flavor of a suppression of the true and suggestion of the false. Jules Morel truthfully, eloquently and emphatically says:

> If every country had the good fortune to have a law for the protection of childhood—if the authorities had sufficient latitude to remove the children from parents and tutors incapable or unworthy—if the Government would organize methodically a system of education for these unfortunates, in a very few years criminality (and degeneracy) would decrease considerably.

Kerlin has shown that incipient criminals of all types exist among the scions of "degenerate" "good families." From these come the greatest danger. The incipient "confidence man" becomes the "respectable" stock company president, or the "respectable" banker and ruins thousands, the "respectable" contractor for county supplies, who freezes and starves the dependent classes, or the "reformer" who nearly ruins his country by outrageous laws violating personal liberty.

If notoriously false rant like that quoted from an "alienist" were denounced by the profession—if the Society for the Prevention of Cruelty to Children was aided (not fought by the venal press) in its warfare against the employment of one-sided morally imbecile geniuses yclept infant prodigies, who appear on the stage—if the measures urged by Dr. Morel were also adopted, certain evils threatening the republic will be averted. As Dr. Kiernan* has said: "The United States were founded by well-balanced men, but unless precautions like these be taken Americans will sink to the level of the Romans, who cared for nothing but 'bread and circuses.'"

* *Journal of Mental Science*, July, 1887.

The Treatment and Prophylaxis of Insanity.*

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I PRESUME it is unnecessary for me, at the outset, to say that I appreciate very highly the courteous invitation extended me by your committee, to read a paper before this very worthy society; and it is of special interest to me, because it was in this grand and philanthropic State of Illinois that I received my first tuition in the department of medicine, which will form the theme of my remarks.

In presenting the subject of "The Treatment and Prophylaxis of Insanity," it is not my intention to cover the entire field which the title of my paper would suggest, but simply direct your attention to a few facts connected with its most frequent and common forms, viz., melancholia.

Melancholia, as its name implies, is characterized by a state of profound emotional perversion of a depressing and sorrowful nature, the same being the offspring of a disordered state of the brain.

Of all the various forms of mental disease, states of mental depression are those that are nearest mental health, hence it appears as the sanest kind of insanity, which oftentimes renders its diagnosis the more difficult, especially in its incipiency.

It presents itself in a number of different ways, with various psychological and clinical symptoms, which admits of its classification, there being, according to Clouston, no less than eight different distinct varieties.

* Read before the Tri-State Medical Society, Peoria, Illinois, October 4th, 1893.

In its more simple forms, however, all authors are agreed that it is more frequent and common than any other variety of insanity, and as such, is a very manageable and curable disease at home, not often requiring hospital or asylum treatment, and in this respect contrasting greatly with all the other kinds of insanity.

Its relative frequency renders its relation to the general practitioner of far greater importance than he is wont to allow, and it was this very fact that led me more especially to select it for your thoughtful consideration.

The department of medicine that has for its object the care and treatment of the insane is unfortunately, for itself, an exceedingly marked specialty, for when patients become insane they are invariably turned over to certain members of the profession, who devote their sole time and attention to this work.

When we remember, however, that no less an authority than Guslain claims (and his experience has been verified by many other of the later authors) that nearly all forms of insanity are preceded by some form of mental depression, the importance of a thorough knowledge of this particular variety of mental disease to the general practitioner is very apparent.

From an extended amount of practical observation and experience, covering a period of several years, I regret to state that this department of medicine receives less attention and its importance is more often ignored by the medical profession than any other branch of medical science.

Now, I hold that the time has come when we, as members of a great and growing scientific body, must of necessity insist upon a more thorough knowledge of mental disease among medical men.

It is surprising, as well as humiliating, to notice how many members of the profession admit, both by their words and actions, that they have given this subject little or no study, and in this way excuse themselves from their lawful, responsible duties.

In the earlier history of insanity, when mental diseases were confounded with superstition, and its etiology and pathology were still more or less imperfectly understood, no one could justly accuse the profession of being responsible for the rapid increase of the incurable insane, but to-day, with all the modern means of scientific research and a thorough knowledge of the brain and its functions, together with a more or less complete system of etiology and pathology of its diseased conditions, can we reasonably ask for such leniency or accept indifference as a sufficient plea for ignorance?

The present status of insanity should certainly demand the earnest attention of every individual medical practitioner of whatever school, and the public properly looks to us for practical aid in solving this most difficult problem.

When the subject of insanity appears on the programme at our medical society meetings, the members invariably decline to take part in the discussion, and offer as an excuse, their inability to do so on account of their lack of knowledge, having given it no thought or study, while many are so indifferent and even discourteous enough to leave the room, refusing to listen to such a dry and uninteresting topic, as they term it. Such conduct is a reflection on the boasted intelligence of the profession and should receive the censure it richly deserves.

In view of the importance of the subject, it is also a lamentable fact that, even at this late period of enlightenment, very few of our more reputable schools of medicine include the clinical study of insanity in their curriculum of studies, indeed, comparatively few teach it didactically, and when this is done, the whole subject is dismissed in about three abstract lectures.

Now I hold that it is impossible to teach the principles of this vast and intricate department of medicine in this crude manner, yet who can deny the truth of the assertion?

In commenting on this, Clouston says:

> How can we know that which we do not study, and how can the family physician give advice and sign certificates about a disease which, as a medical student, he has never seen or had explained to him clinically?
>
> As well might you ask a man to give you a life insurance certificate that a patient was free from heart disease, who had never listened to a cardiac murmur.

The gross laxity of the college faculties in ignoring this important branch of study, is to a great extent responsible for the increased production of the more incurable forms of the disease, as well as the encouragement of indifference and ignorance among the members of the profession. A glance at statistics is sufficient to prove the grave responsibilities which rest upon us at the present time, and we are inexcusable, if we fail to furnish the means and measures which medical science and art place at our disposal for its speedy relief. In 1880 this country had a population of 50,155,783, and a total number of insane estimated at 56,205. The late census, which was probably the most careful and painstaking one ever made, furnishes me the following facts: With a population of 62,622,250, the total number of insane treated in both public and private institutions during the year 1889 was 97,535, which shows the marvelous increase in nine years of 41,330 or 73.53 per cent. In this connection it may prove interesting to note the number of insane treated in each of the three States represented by this society, during the same period, as follows:

Illinois.—Jacksonville, treated (in the nine years)	3,340
Elgin	1,612
Anna	2,154
Kankakee	4,181
Cook Co., Chicago	4,724
Batavia (private)	277
Oak Lawn, Jacksonville (private; for 2 years)	47
Total for Illinois	16,335

Iowa.—	Mt. Pleasant	3,659
	Independence	3,511
	Clarinda (for two years)	323
	Total in Iowa	7,493
Missouri.—	St. Joseph	1,769
	Nevada	484
	St. Louis	2,478
	Fulton (not given)	
	St. Vincent's (private)	1,390
	Total for Missouri	6,121
	Grand Total	29,949

In order to have accurate statistics, I sent to the Census Bureau at Washington, and they kindly furnished me with a table showing the number of insane in each State of the Union in the year 1890.

This I analyzed and compared with a similar one issued in 1880, and found that the relative number of population for each insane person in sixteen States was, as follows:

	1880.	1890.	INCREASE.	DECREASE.
New York	one in, 360,	330,	8.3-10	.....
California	" 345,	336,	2.7-10	.....
Massachusetts	" 304,	367,	.....	1.7-10
Ohio	" 430,	470,	.....	8.5-10
Wisconsin	" 521,	480,	7.8-10	.....
Maine	" 421,	508,	.....	17.
Michigan	" 585,	562,	3.9-10	.....
Illinois	" 600,	570,	.5-10	.....
Iowa	" 639,	590,	7.6-10	.....
Minnesota	" 685,	591,	13.7-10	.....
Pennsylvania	" 516,	620,	.....	16.
Indiana	" 560,	663,	.....	15.
Kentucky	" 502,	681,	.....	25.
Missouri	" 655,	784,	.....	16.5-10
Kansas	" 1000,	796,	20.	.....
Nebraska	" 1005,	1136,	.....	11.5-10

This table shows that Illinois and Iowa have both increased, while Missouri has had the greatest decrease in any State of the Union in the ten years, with two

exceptions, viz., Maine and Kentucky. Kansas on the other hand has lost her former low standard and increased twenty per cent., while Nebraska still retains the supremacy of having less insane to the population than any other State.

Another important element in this connection is the annual expectancy of insanity or the number of persons liable to become insane each year. It has been demonstrated conclusively that out of a given number of population a definite ratio will become insane annually, which varies in number in the different States of the Union. For instance, in Missouri, we expect out of a population of a little over two and one-half millions nearly six hundred persons will become insane this year.

Applying this same rule to Illinois and Iowa, the former, out of a population of 3,826,351, can expect at least nine hundred new cases of insanity this year, while Iowa, with a population of 1,911,896, can look for about four hundred, which makes a grand total for the three States of at least 1,900 new cases of insanity liable to occur during the present year. All of these cases, therefore, constitute the recent or acute, and therefore, presumably curable cases of insanity.

Now all authorities are agreed that at least fifty per cent. of recent insanity is curable, and insist that the most important law governing its incurability is a lack of appreciation, or delay in securing prompt and appropriate treatment in its incipiency.

The great pathological law which holds good in other diseases, viz., the longer the duration of the disease the less the chance of recovery, is even more potent in the treatment of insanity than in any other disease.

Again, statistics prove that all the new cases of insanity rapidly fall into one of three classes, viz.:

1. Those in which the violence of the disease proves speedily fatal. These constitute a very small proportion, about five or six per cent.

2. Those who recover their mental health under prompt and appropriate treatment. These comprise about one-half, or fifty per cent. of the original number.

3. This leaves a little less than half or about forty-five per cent. of the new cases which arise annually to become chronic, the great majority of which are incurable and hence become a burden to the State the remainder of their lives.

A proper treatment of the recognized curable forms of insanity is therefore a matter of serious import, not only to members of the medical profession, but to all parties concerned.

Now, the treatment and prevention of insanity can be effective only in proportion as the causes are accurately ascertained and wisely avoided or removed.

The etiology of all forms of mental disease, it seems to me, can readily be grouped into two great classes, viz.:

1. Individual congenital defects.
2. Individual acquired defects.

The former comprises all those conditions pertaining to ancestral inheritance, while the latter embraces those which arise in the life history of the patient. Both of these may co-exist and often do so, indeed, in by far the greater number, still there are many cases in which the causes are so directly the result of personal injury or self-abuse, that they must be solely regarded as sufficient in themselves to cause the morbid mental changes, irrespective of inherited taints.

The chief cause of the congenital type and that which, in my judgment, underlies all the rest in producing and propagating states of mental depression, is the neurotic diathesis, or innate brain constitution of the individual. This manifests itself by nervous instability and defective innervation of the organic functions making itself felt by a constant tendency to degenerative changes in the nerve elements, rendering the subjects of it peculiarly liable to break down under certain stress of circumstances, which

would not specially affect another person inheriting a different constitution.

How this predisposition can be managed and modified is a very important practical question for us to solve. We may not, it is true, be able fully to explain its intricate pathology, but we do know that the number and diversity of inheritable deviations of structure and function are endless, and these are the problems we have to deal with in the treatment of melancholia.

Outbreaks of insanity in persons inheriting a favorable predisposition seem to be in some manner connected with the growth and process of evolution of the individual, more especially at the physiological crises. These abnormal conditions of inheritance are often the result of imperfect growth, defective nutrition, incorrect habits, injudicious education and modes of life of the parents, the general effects of which tend to lower the normal standard of health.

Fortunately, we can certainly declare that this predisposition is not a mysterious and necessarily fatal doom, certain at some time to overwhelm its victim. It is purely a physical defect which can be remedied and even cured, and loses half its horror when this is fully realized and understood.

Next to heredity is emotional excitement. It has been said that our emotions and affections are the mightiest factors in our lives, and they afford a vast field for the manifestation of nerve instability. "It is in the regulation of our moral nature," says Dr. Yellowlees, "by reason and duty and in controlling our fancies, impulses and passions that we tend to escape such penalties."

At this point we may pertinently inquire: From whom are the ranks of the insane mainly recruited? The answer is certainly, "From the men and women whose minds and hearts are untrained and ill-balanced, who are swayed by caprice and passion, and whose lives are ill-regulated and changeable. The access of insanity is often the ultimate wreck of a vessel without a helm.

Among the more prominent direct or acquired causes of insanity are the use and abuse of certain agents, such as alcohol, opium, excesses of all kinds, mental and physical strains, overstudy, excessive grief, domestic infelicity, malformation, disturbances of circulation, acute diseases and injuries of all kinds.

In most cases of insanity we are very apt to find several of these factors playing some part in inducing the morbid mental change, and the pathological phenomena so far discovered, all have for their basis some interference with the due nutrition, growth and renovation of the brain cells. While the true pathology of insanity is still in doubt, nevertheless, we are in possession of some facts which are essential aids in the treatment of the various forms.

Meynert considers melancholia as a symptomatic disease, arising from trophic disturbances of the anterior lobes of the brain. This results in a dejected and saddened expression with decreased activity of mind and body due to the anæmic condition of the cortical cells.

We are all aware that melancholia has for its chief symptoms mental depression, headache, and insomnia. Clouston says that mental depression is simply the functional expression of convolutional malnutrition. Cortical anæmia, therefore, is now recognized as being the chief pathological state we have to deal with in this, the most common form of insanity.

Now, clinically, we are all aware that an abnormally anæmic condition of any organ practically means starvation and which, if long continued, results in degenerative changes which rapidly become incurable.

Treatment.—The treatment of melancholia is therefore directed to the correction and maintenance of a healthy and proper blood supply to the brain.

Dr. Clouston says:

If the brain and body conditions that accompany, do not cause states of morbid mental depression, if they are those of trophic defi-

ciency, as they undoubtedly are, then it necessarily follows that what will remedy those conditions is indicated, and all things that will aggravate them must necessarily be avoided.

The means by which these ends may be secured, it seems to me, are fourfold:

1. By moral persuasion.
2. By the use of drugs.
3. By hygienic measures.
4. By mechanical appliances.

1. *Moral Treatment.*—The underlying principle in the moral treatment of the insane is that the patient should be treated as a reasoning being, in other words, from the moment he comes under your care, it should be assumed that he will understand more or less correctly all that is said and done to and for him.

He should, therefore, be treated as if you expected him to act rationally, and if he should fail, lead him by moral persuasion to do what you expect him to do. At the same time the fact of his being mentally deranged should be borne in mind.

All moral treatment should have for its highest aim, therefore, the calling into normal exercise and use the rational part of the disordered mind. It should be assumed by both the physician and nurse that the patient is capable, to some degree at least, of understanding the fact that he is ill, and your conduct towards him should frankly and consistently show this. It must also be remembered that the normal functions of the brain may be only temporarily deranged, and that in most cases some degree of normal function remains.

It seems beyond the comprehension of many persons that insanity deranges, rather than destroys the mind, in its incipient stages: Much therefore, depends upon your selection of a responsible nurse to carry out the principles herein enunciated. Another important step is the *isolation* of the patient whether treated at home or elsewhere: It is often with difficulty that the friends and relatives can be made to realize the necessity and

importance of this measure. But those of us who have devoted our time and attention to this study, know too well that the probabilities of recovery are much increased when the patient is committed to the care of strangers.

Much more might be said under this heading, but I hurry on to speak of the use of drugs in the treatment of melancholia.

2. *Use of Drugs.*—If mental depression is the functional expression of convolutional malnutrition, as I believe it is, then every therapeutic agent which tends to restore the healthy action of the brain is indicated. My friend and teacher, Dr. L. C. Gray, of New York, advises the use of opium in his late work for the direct treatment of melancholia.

Clouston says he performed a series of elaborate experiments with it in melancholia, and it always caused a loss of appetite and loss of weight in every case, and Dr. Mickle has confirmed these results.

In my own practice I seldom use it, as I believe it interferes with two of the most important functions for its speedy relief, viz., digestion and assimilation. Then again, often when called in consultation, I find many practitioners prescribe indiscriminately the bromides and chloral for the relief of insomnia, which is nearly always a troublesome symptom. If before using these drugs they would remember the pathological condition present, I am sure they would not employ them, for this purpose, in the treatment of melancholia.

Fortunately, we have at our command to-day many agents which are preferable to either of these for inducing sleep. Sulphonal is by far the best drug for this purpose.

The majority of melancholiacs are much below par in body weight, indeed this seems to be of more diagnostic importance than would at first appear, as there seems to be a marked relation between the two. Such remedies as tend to increase body weight are therefore urgently needed, as in my experience the physical improvement

precedes the mental. For this purpose I use quinine, iron, strychnia, phosphorus, arsenic, cod liver oil, mineral acids, vegetable bitters, hypophosphates, laxatives, whisky, malt preparations, etc., besides food of all kinds, especially *milk* and *eggs*. In many cases milk is my sheet anchor. I have given as much as three quarts a day for months at a time beside six eggs daily.

Blood enriching tonics and fattening diet are the most potent remedies for the relief of morbid mental depression, while the various hypnotics, such as sulphonal in doses of from ten to forty grains, paraldehyde from one-half to two drachms dissolved in chloric ether or cinnamon water, chloralamide from twenty to forty grains, somnal from one-half to one drachm, and very occasionally chloral are in my judgment the best agents to produce artificial sleep.

In the more restless forms of the disease sedatives are called for, and among the best of these are hyoscine in doses of one-hundred-and-fiftieth of a grain to one-eightieth of a grain, used either hypodermically or by the mouth; cannabis indica, lupulin and conium are also valuable agents.

All medicines that tend to lessen the appetite and impair digestion and nutrition are contra-indicated in this disease. The nervous diathesis at best does not put on fat naturally. We must, therefore, combat the tendency to innutrition by scientific dieting and appropriate therapeutics. Next in importance is proper hygienic measures.

3. *Hygienic Measures.*—In my experience moderate and suitable daily out-door exercise is indispensable in the treatment of melancholia. I make it a rule to keep my patients in the fresh air as much as possible. It is the best hunger and sleep producer I know of. Without this all other means fail. In some cases the rest and change that belongs to a sea voyage is preferable, but in others it is directly harmful; absolute change in habits and surroundings, rest from all mental labor,

judicious use of baths, pleasant and cheerful society, moderate and agreeable occupation and the substitution of pleasurable feelings for painful ones are the principal features to be aimed at in the hygienic treatment of the case.

4. *Mechanical Appliances.*—In the care and management of the insane, the enforcement of kind but firm discipline is essential for the best results. It must ever be borne in mind that you have an irresponsible being to deal with, therefore, you yourself must do the reasoning until such time as your patient is mentally responsible.

No class of cases require more tact and skill to properly manage than the more simple varieties of insanity, and the less they are removed from true sanity the more difficult the task.

Every precaution must be taken to guard against suicide, for in many instances they will resort to every conceivable method to accomplish such a purpose. Many refuse to eat or take medicine in the hope of terminating their lives by starvation. The use of the stomach or nasal tube is therefore indicated. If they are obstinate and pugnacious the temporary use of the strait-jacket is warrantable.

In referring to this, I am aware that many regard the use of mechanical restraint as cruel and unnecessary, but, after many years of observation and practical experience with the insane, I am compelled to state that I believe its judicious use to be not only necessary but humane.

The extra amount of help and appliances to be found in every well-equipped asylum is not often available in private practice, hence we are compelled to do the best we can with limited means and measures.

There are many other points which could be profitably referred to here, but my paper is now altogether too bulky, and before closing I desire to say a few words on prophylaxis.

Prophylaxis.—Insanity is a strictly physical disease, and as such, comes eminently within the range of preventive medicine.

No greater progress has been made during the present century in any department of philanthropy and science than in the direction of the better care of the insane. But a greater work remains to be done, a work that is even greater than cure or kindly care. It is that of prevention. The great question before us to-day is, not only what can be done for the chronic insane, but how can we *prevent insanity?*

We are all compelled to accept the science of prevention as a higher and greater power than the science of remedy. In order for this to be effective, it must necessarily reach back to the family life, the school life and even the nursery and cradle of the child.

The science of prevention, therefore, must be looked for outside the wards of a hospital.

The general practitioner, of all others, says Dr. Mann, is in a position to check the sources of insanity at their very beginnings:

> By carefully directing the mental and physical life of a pregnant woman, he may form the future mental complexion of the unborn child. He may watch over the child's brain during the early formative period of infancy and childhood, and so advise the parents, that they may guide the children in the paths which lead to mental stability.
>
> He may recognize the insane or neurotic diathesis and by intelligently recognizing that such a person is more liable than others to mental disease, may apply a wise culture to the erring emotions and discipline to the conduct in the early years of life, while they are yet applicable and the fearful heritage may oftentimes be avoided.

Especially is the preventive aspect most important in the dieting, occupation, habits, education and general careers of such persons.

Too often an indifference is displayed by the family physician to give such advice and counsel as is necessary. Yet he is derelict in his duty if he fails to sound the alarm. Another important feature which comes within the province of the family physician is to guard *against*

a relapse in those who have already suffered from melancholia. From an extended amount of observation and experience in this direction, I do not hesitate to affirm that many cases could be saved from the wards of an asylum were this law more fully understood and obeyed, by both the physician and friends of the patient.

Bearing in mind the pathology of the disease and the loss of body weight which accompanies it, I advise all my recovered patients to weigh themselves at least once a month.

If there be the slightest loss from the normal standard, I advise them to be on the alert and not be satisfied until it be regained; a loss of a few pounds in weight may be the first real warning of the disease returning, even though they may feel as well as usual. In addition to this I advise them to lead quiet, routine, systematic lives, taking regular periods of rest and repose as well as much out-of-door air and exercise, interspersed with suitable employment of both mind and body.

Self-control and prudence in observing the laws of health, watchfulness in avoiding excitements of all kinds and the cultivation of right and just views of life, constitute the strongest security against the return of the dreadful malady.

To sum up the whole matter, the treatment and prophylaxis of insanity consist, as Dr. Mann wisely says, in a proper recognition of known physiological, mental and moral laws, which when properly understood and obeyed result, not only in the highest development of the race, but in the highest type of civilization.

Study of the Causes, Symptoms and Treatment of Partial Epilepsy.*

By Roque Macouzet, M. D., of Mexico,

Physician to the Divino Salvador Hospital for Insane Women and to the Public Board of Consultation; Secretary of the Medical Association "Pedro Escobedo," and Member of the Scientific Societies, "Alzate," etc., etc.

I AM going to occupy the attention of the members of Section XVIII. of the Pan-American Medical Congress, for some moments by some considerations on the causes, symptoms and treatment of Partial Epilepsy, based on my observations of several years in the Divino Salvador Hospital for Insane Women, whose physician I am. I restrict myself exclusively to the study of Partial or Jacksonian Epilepsy, for although the opinions of the prominent neuropathologists are divided about the classification of certain cases, it will be evident in the course of this paper what my personal view is in this respect. I prefer this to trying to give a definition, this being difficult in medical matters generally, and especially in this branch of medical science.

From the statistical notes that we have prepared we see that the most common causes of Jacksonian epilepsy are cerebral tumors (gliomata, neuroglic or angiocolitic (?) sarcomata, psammomata, carcinomata or myxomata). Next comes syphilis (gummata, osteomata, etc.); inflammatory softenings, meningitis, cranial traumatism, cortical abscesses and hemorrhages, meningeal and cranial tumors, cerebral tubercles and atrophy. These facts we have obtained from our own autopsies and from the studies that different Mexican physicians have made in the capital and the States of Mexico on the dead bodies of individuals who had been suffering from the disease in question.

* Read before the Section on Diseases of the Mind and Nervous System of the Pan-American Medical Congress, Washington, D. C., September 6th, 1893.

Symptoms.

In order to study the symptoms of Jacksonian epilepsy methodically let us divide them into two great groups: 1, Those of the attack; 2, Those of the intervals.

Let us begin with the latter.

The symptoms that the patient presents in the intervals between the attacks are very varying and may be classified as psychical, sensory, motor and trophic.

The psychical symptoms.—One of the facts that claims most attention in connection with the study of this class of patients is the intellectual apathy. In almost all those that we have had a chance to observe, the memory was almost *nil*—so much so that some would even forget their own names; the attention was excessively enfeebled, the comprehension likewise; the same may be said with regard to the affective faculties. This intellectual torpor is more marked after the attacks. Generally the patients are irascible. Sometimes they exhibit after the attack a tranquil sub-delirium, although it is not rare to see them the prey of an attack of acute mania, as we have observed in one case. Hallucinations of sight and hearing are not rare; in some the apparition of extravagant figures, monsters, wild beasts, etc., etc., ushers in the attack; in others this is done by a confused and ill defined noise, by a vague buzzing, by a voice that stammers incomprehensible words in a foreign language, or by a hissing. There are also hallucinations of the sense of smell, sometimes the odor of flowers being perceived, in other cases caustic or pestiferous odors. Also illusions have been observed.

Aphasia in its different forms occurs occasionally. We have observed a case of representative word-deafness in a Jacksoniana. Sometimes there is word-blindness, but this is very rare; the same may be stated about agraphia.

Vertigo is one of the most constant symptoms. Sometimes it is the first symptom that appears; at other times it accompanies the other symptoms, or appears after them.

It is observed under very varying conditions. It may be necessary that the patient makes very strong and rapid movements before it is produced, or the mere sitting up in bed, getting up or turning the head may be sufficient. It must be noted that this is sometimes the only symptom of the disease, especially the form that is called apoplectic vertigo, in which the patient falls down unconscious, getting up almost immediately.

The sensory symptoms.—Headache is a symptom that is as frequent as it is troublesome. It is sharp, lancinating, and persists for weeks without remission. It is exacerbated by light, by movements of the head, by noise, by stooping, by the simple effort of expiration, and it is so severe that it is never observed to be of like intensity except in uræmia and meningitis. At other times it is not just a headache but a sensation of fullness or emptiness. It appears to some patients that they carry inside their skulls a foreign body that is displaced by shaking the head, or that there is a viscous fluid which passes slowly through the whole cavity, or which, on the other hand, is very liquid and changes its place with rapidity; some complain that their heads appear about to burst.

The seat of the pain does not always indicate the seat of the lesion that produces it. There are cases where it occupies the whole head, and others where it is felt in a place quite opposite to the one that is indicated as the seat of the lesion by the other symptoms; and it is not rare that it changes its place. However it is easily understood that there are cases in which the seat of the tumor coincides with the seat of the headache; for instance, a pain that is fixed in the occipital region will make us inclined to believe that the cerebellum is the seat of the trouble.

With reference to the sense of sight we may mention the *mouches volantes*, scotomata, congestions, obstinate inflammations of the conjunctiva, a purulent discharge from the eye, strabismus, optic neuritis, amaurosis, that may arise slowly or rapidly, œdema of the papilla, hemorrhage

or atrophy of the same structure. It is easily understood which must be the seat of a lesion in order that such changes may be produced, but we should not allow to pass unnoticed that these are almost always bilateral, although the lesion usually is unilateral. The explanation of this paradox is the following: The decussation of the optic nerve in the chiasma is not complete, so that each nerve between its origin and the point of crossing contains fibers going to either eye. It is therefore sufficient that the lesion affects the nerve in this tract, leaving intact the quadrigeminal tubercles and the chiasma, in order to produce symmetrical ocular symptoms. If however the lesion is between the chiasma and the eye, the disturbances must of necessity be unilateral.

The disturbances of hearing consist of weakening and sometimes complete deafness. There are cases in which there is, on the contrary, a very pronounced hyperacousia. There are usually attacks of severe pains in the ear, or noises and other disturbances which may be accompanied by Menière's vertigo.

The senses of smell and taste usually persist in their integrity, but there are some rare cases which announce themselves by anosmia, and rarer ones yet that are characterized by the disappearance of the sense of taste. The same may be said with respect to the exaggeration of these senses. There is usually observed Pitres' alfalgesia on the same side. The general sensibility undergoes some modifications. Sometimes there is anæsthesia, principally on the paralyzed side; at other times there is, on the contrary, a true hyperæsthesia, so that the patient is not even able to bear the contact of the clothing. The sensibility to heat and electricity also undergoes manifold changes.

The motor symptoms.—Paralysis of the limbs is very frequent, but very rarely complete, in contradistinction to what takes place in the cases of hemorrhage, embolism, etc. Very often the paralysis affects the limbs of one side, beginning in one group of muscles and gradually

affecting the whole limb, then passing to the other extremity of the other side. But it is not rare for the paralysis to affect all the limbs; in this case a simple hemiplegia precedes the paralysis of the other side. This occurs if there is either a multiplicity of tumors, or if there is only one, but situated in such a way (over the two peduncles, over the central part of the mesencephalon) that it produces compression of the motor fasciculi going to all the extremities. A lesion that is localized in a way as to produce a paraplegia, is exceptional. The sphincters usually preserve their normal functions. These paralyses are sometimes persistent, and sometimes not. They may disappear entirely or be attenuated to simple pareses. The reason for this is to be found in the originating cause. Some paralyses are produced by the direct compression exerted by the neoplasm—and these naturally must be persistent,—others depend on some circulatory disturbances, such as congestion, œdema, or even phlegmasia, and are subject to variations, as is the producing cause.

The loss of equilibrium is another symptom that occurs. It is easiest observed when the patient gets up rapidly, or when he is made to walk with closed eyes.

Hammond's athetosis is observed rather frequently, especially in those cases where there is paresis or a more constant paralysis, and it has been observed that the convulsions begin in the same fingers that are seen to execute the vermiform movements characteristic of this symptom.

Contractions of the muscles of the limbs occur, although very late, except in the case of Jacksonian epilepsy from atrophy. In this case they are observed early, and pathological anatomy has shown the existence of secondary degenerations of cortical origin in the peduncle, the protuberance, the bulb, and the antero-lateral tract of the cord. In these cases the reaction of degeneration is present.

The cranial paralyses are generally on the same side

as the lesion. The topographical relation between them and the paralysis of the limbs is very varying. Sometimes they occupy the same side of the body, sometimes opposite sides. This happens when the tumor acts on the peripheral portion of the nerve (original cells and intercranial tract), and not on the true cerebral portion in this case, and if we take the cerebral hemispheres as the point of departure, the eye is affected after its decussation, the motor tracts of the limbs before their decussation, and consequently the paralysis must be found on different sides: on the side of the tumor for the cranial nerves, and on the opposite side for the extremities. If this is the form most frequently observed, it is because the tumors are generally situated at the base or in its neighborhood, thus being most avorably located for exerting a double action; a direct one on the cranial nerves, and a crossed one on those of the extremities. Take for example a tumor that compresses the right cerebral peduncle at the level of the point of exit of the common oculomotorius. Since this nerve does not undergo any more decussation, and since the nerve bundles going to the limbs cross before reaching the peduncles, those contained in the right peduncle going to the left side, we are going to have the alternating paralysis of Guller, which is a good symptom for the diagnosis of tumors of the base.

Let us now assume the presence of a tumor situated in the right hemisphere above the corpora striata and of the optic thalami; the paralysis of the eye will be found on the left side, as will be that of the limbs, because the nerves of the third pair have already decussated at that level, so that the hemispheric portion of the nerve of the left eye occupies the right side. We may therefore repeat that compressions of the cranial nerves give rise to direct paralyses, if they take place in the peripheral portion, and to crossed paralysis, if they take place in the central portion.

The reflexes are generally preserved or are exagger-

ated. In the majority of female patients that we have studied, we found them exaggerated, principally on the paretic side. In one of the patients the trying to produce the patellar reflex provoked clonic convulsions that began in the foot, extended to the leg and then to the thigh, remaining limited to this extent, and in another the percussing of the tendons of the anterior surface of the wrist provoked a real attack of general convulsions with loss of consciousness, which were much more marked on the side that had been percussed, this being the one most affected in its motility, and atrophied.

The trophic symptoms.—Vasomotor disturbances are very frequent. Sometimes the patients feel icy-cold in the paretic or paralytic extremities, and these may appear quite pale to the eye. Others, on the contrary, are extremely red, and the patient has the sensation of burning heat. But this is not all, there being a true atrophy of the limbs of the affected side. The measurements that we have made, have shown a difference of circumference of some centimeters between the corresponding extremities. The secretion of sweat is sometimes increased and sometimes diminished; the same may be said about the secretion of sebum. There are cases in which the hairs of the skin fall out easily. The nails sometimes become distinctly thin on the affected side. It is evident that in consequence of the paralysis of some muscles the action of their antagonists predominates. This is how the difference of position of the hand, for instance, arises, the action of the flexors generally persisting in them. If the paralysis persists, the wrist-joint may undergo a subluxation towards the dorsal aspect, a fact that we have been able to verify in several of the patients that have been studied by us. The same may be said about the inferior extremity, the foot taking on very different positions according to the muscles affected (*pes equinus*, *varus*, *valgus*, etc.); for this reason and on account of the pareses, limping is frequent amongst these patients.

The general condition is as a rule satisfactory, except when vomiting is obstinate and periodical, nutrition then becoming impaired. There are cases in which there is much increase in flesh, even to obesity. As to the vomiting, we have to add that it has all the characters of vomiting of cerebral origin. There is no nausea nor gastric disturbance. It takes place without any exertion, and there is no hypersecretion of saliva, which usually precedes vomiting of different origin. The position of the head has much influence on the appearance of this symptom, so that it is often sufficient for the patient to place himself in the supine position to stop it, whereas it reappears as soon as he leaves this position suddenly. We also observe desquamations and superficial gangrene, as well as imminent vasomotor gangrene, Reynaud's local asphyxia of the extremities.

Let us now pass on to the study of the *symptoms of the attack itself.*

1. *Aura.*—This may be sensory, or motor, or vasomotor. The physician often gets from the mouth of his patient an exact and detailed description of the sensations that he or she experiences before the attack, because intelligence is fully preserved up to that moment. Those of the first group, of an anæsthetic or analgesic character, are most frequently observed. Hyperæthesia is rare. Amongst the vasomotor phenomena we have the sensations of intense cold or heat with increased redness or pallor of the skin. The patient compares this to the sensation she would have if her hand were suddenly submerged in an ice-cold or boiling-hot bath. There are cases where an abundant secretion of sweat accompanies these sensations.

As to motor symptoms, there sometimes is a localized trembling in one or two fingers; or there may be Hammond's athetosis, the fingers bending and extending alternately without any order, these movements becoming exaggerated if the patient tries to suppress them or if he directs his attention to them. These movements have

been compared to those that a cuttle-fish executes with its arms; now it is one finger that bends and extends in rhythmical movements, then the fingers of the hand are pressed together so that at first sight they appear like naturally inseparable; then the fore-arm is flexed energetically on the arm, the palmar surface being carried so far over as to almost look outward; now the whole arm is raised like threatening, and then finally the eyes are caught by nystagmus, turning upwards or towards the paralyzed side, although without strabismus. These auræ always have a common characteristic, viz., to be constant; they always present themselves with the same detail, and the patient is able to predict the moment of his attack with mathematical exactness. The location and extension of the latter depend on the irritating cause.

2. *The attack.*—According to Rolland there is, in the majority of the cases, an initial contraction, which is quickly followed by more or less violent clonic convulsions, which sometimes remain restricted to the limb in which they begin, but much oftener are propagated, running off in a perfect cycle. Our own observations practically agree with those of Rolland. We have observed that if the convulsions begin in the upper extremity, they next invade the face and then the inferior extremity; if they begin in the latter, they next attack the upper extremity and then spread further; if they begin in the face, the upper extremity is next affected and then the lower.

The most commonly observed types are the facial, the brachial and the crural (the latter being the rarest).

If the convulsions, after beginning in one limb, have spread to other parts, they always show the greatest intensity in the limb where they started. The duration of the attack is the shorter the more intense and general the convulsions.

Loss of consciousness is not constant.

During the convulsions the temperature of the body remains normal; pulse and respiration are accelerated.

In some patients the intellectual apathy is more marked after the attack. One of the patients that we have observed would slap her cheeks violently after the attack, and another would run until her strength gave out. Not all patients fall down under the attack; they try to lie down if the onset leaves them time to do so, and many sit down in order to allow the attack to run off while they are in this position.

The average duration of the attack is three minutes.

Treatment.—When the nature of the lesions that cause Jacksonian epilepsy was not known, all sorts of remedies were used to treat it, some of them being reasonable, others empirical, others absurd. We shall try to mention those that have been in most common use. On the basis of an erroneous theory they used to abort the attack by applying a tight ligature to the limb in which the convulsion began. In this manner generalization of the convulsions was sometimes prevented, but this being accomplished, the patient was left in such a depression, such an uneasiness and under the influence of such a dizziness that he soon would object directly to this remedy, preferring unchecked attacks.

Later, Bravais enthusiastically recommended continued vesication, innumerable blistering plasters being applied in succession to the limb in which the convulsions started. This method was carefully studied by Bentley and Todd, and ultimately by Brown-Séquard in 1861. They all agree that it is uncertain in its action, and very troublesome to the patient. The open wounds in the affected limb, setons, moxas and the cautery became the fashion, all with similar results. Besides, many substances were recommended for internal administration, such as belladonna, hyoscyamus, oxide of zinc, sulphate of copper, nitrate of silver, chloride of gold, opium, camphor, and

the bromides; also hydrotherapy, electricity, magnetism, etc., etc. But from the present stand-point of science we may make the following general statement: "The only efficient treatment of Jacksonian epilepsy is surgical intervention." With respect to syphilitic lesions, such as cerebral gummata, etc., the mixed treatment is indicated, and if the nature of the lesions cannot be made out with certainty, the same may be used as a test. At the Berlin Congress of 1890, Horsley expressed his opinion on this point in the following manner:

> Many clinicians admit that the treatment with mercury and iodides always resolves cerebral gummata and syphilitic pachymeningitis. Already Gowers, although he admits that considerable improvement is observed after this treatment, protests energetically against the view that assumes a total restoration. As to me, I am sure that the pachymeningitis, whose tendency to recurrence is so great even after ablation, is improved only, and never cured by the specific treatment, and as to cerebral gummata, I have to say, on the ground of several autopsies, that very little should be expected from this treatment, and that the only way to cure them is ablation by means of trephining. The proofs exist.

The same surgeon protests against protracting the period of experimental mixed treatment:

> My opinion is that it is quite reasonable not to fix a precise limit to this attempt, because this practice sometimes obliges us to operate too late. My idea is that the limit should be six weeks. If there is no marked improvement within this period, we should no longer hesitate and should proceed to exploratory trephining.

This somewhat too exclusive opinion of Horsley should not be upheld in all cases. It should be left to the judgment of the clinician and to the careful consideration of the symptoms presented by the patient, whether this or that procedure should be adopted.

Let us then say that the progress of surgery, that we owe in great part to the highly interesting works of Demons, Horsley, Pitres, Ferrier, Championière and so many others, and which is powerfully supported by the practice of antisepsis, which makes trephining an operation

whose mortality has been considerably reduced, has contributed much to alleviate the sufferings of those unfortunate people who are condemned to lead a miserable life, which would gradually be extinguished under the fearful sufferings of the epileptic attacks.

In Mexico the operations that have been undertaken for curing such patients, have been successful.

Muscular Atrophy Considered as a Symptom.

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ATROPHY, or wasting of the muscular fibers, whether occurring insidiously or *en masse* may or may not be indicative of disease of the nerve centers. Although not of such serious import that its recognition demand early therapeutic procedures, nevertheless it is necessary to detect the cause of this retrogression in order to render a correct prognosis and to plan the proper treatment. Diseases of the brain and spinal cord are as a rule sub-acute or chronic, run a long course, manifest themselves by vague, indifferent symptoms and yield grudgingly to the resources at the neurologist's command. Wasting of the muscles is one of the most prominent of the objective symptoms of brain and cord disease, and if properly considered and appreciated may give us important clues for the location and detection of the neural lesion with which we are confronted. It is by no means pathognomonic, but when associated with other groupings of subjective and objective symptoms, becomes at once characteristic of definite lesions in the brain, cord, peripheral nerves or muscle itself.

The premise must not be inferred, however, that all muscular degeneration is pathological or dependent upon some initial lesion in the nerve centers, for it is a fact that wasting of muscles occurs independent of any nerve or muscle lesion but due to purely physiological changes, or when the active cell growth is no longer predominant but has been succeeded by a period of involution or cell decay. This we call senile wasting or acute atrophy.

Another form of atrophy or lack of development which must not be confounded with either physiological or pathological wasting is aplasia and hypoplasia of the extremities, conditions arising in utero due to the arrested development of the embryo as a whole or in part. These developmental defects are the result probably of some constriction or pressure from folds or bands of the fœtal membranes, or by loops of the umbilical cord. Cases of this kind are by no means rare but have been carefully studied by Foerster, Voight, Gruber and others. The different classes are distinguished according to the degree of malformation, as follows:

1. Amelus. Limbs entirely wanting or replaced by wart-like stumps.

2. Peromelus. All four extremities stunted.

3. Phocomelus. Limbs consisting merely of hands and feet sessile upon the shoulders and pelvis.

4. Micromelus. Limbs regular in form but abnormally small.

5. Abrachius and Apus. Absence of upper limbs, while the lower are well formed, and *vice versa*.

6. Perobrachius and Peropus. Arms and thighs normal; fore-arms and hands, legs and feet malformed.

7. Monobrachius and Monopus. Absence of a single upper or lower limb.

8. Sympus apus and Sympus opus. Absence of feet or may be represented by single toes, or by one foot, as in siren monsters.

9. Achirus and Perochirus. Absence or stunted growth of the entire hand or foot. [Ziegler.]

It is not the purpose of this paper to invade the field of teratology, but to study another morbid process which also ends in defect of structure—not however through interference of growth but through the destruction and degeneration of muscles once able to perform work measured by their development and vitality. This process is more properly termed regression or retrogression, and the designation *muscular atrophy*, as commonly

employed, has reference only to a retrograde metamorphosis of a fully developed muscle.

Inasmuch as there are atrophies due to physiological and also atrophies due to pathological processes it is of the utmost importance to distinguish between them. Generally speaking, physiological atrophy occurs as the result of the decadence of the vital powers due to senile changes: It is not attributable to any direct appreciable lesion and the atrophy is considered as active. Another class bordering closely upon physiological atrophies are caused by derangements in whole or in part of the constructive organs, febrile processes, etc. These latter are considered as passive and the atrophy is unlimited in its extent. Local atrophies due to mechanical hindrances, injury to the tissues, through interference of the circulation, and overwork are also examples of passive atrophies.

Pathological atrophies, on the other hand, are the results of demonstrable organic lesions either in the brain, cord, peripheral nerves or muscles, follow certain laws in their distribution, and are accompanied by subjective and objective symptoms characteristic of the focal lesion.

Subjective Signs.—The advent of progressive muscular atrophy in many cases, and especially in those other forms of atrophy not dependent upon acute inflammatory processes, is ushered in by some localized, deep-seated, aching pain, to which little attention is paid. In others, some slight sensory disturbance, as a feeling of numbness, heaviness or sharp lancinating pains, as in neuritis, may precede the atrophy, while in many no warning whatever is given of the enfeeblement which is soon to occur. Generally the first thing that attracts the patient's attention is the inability to execute certain movements, which, but a short time ago, he was able to carry out with ease and dexterity. If he be an artisan and the atrophy begins in the muscles of the hand, as it often does, the weakness will soon incapacitate him for his work; if a laborer and the atrophy first affects the

shoulder muscles, or muscles of the back, or if a pedestrian and the peroneal muscles succumb early, he is soon made cognizant of some loss of power, which to him remains for some time unaccountable. This weakness is often ascribed to overwork, exhaustion or fatigue, and the usual remedy—rest—fails to restore to the former condition. I have met patients in clinics, especially females, in whom atrophy of the muscles of the hand and arm had existed for years, and attention first called to it by the physician while examining for some other ailment. Instruments have been devised for measuring approximately the strength of the arm and leg muscles, and although the figures may vary somewhat at each trial still they are accurate enough to indicate the progress of the wasting. The dynamometer is perhaps the best instrument for estimating the power of the flexors of the fingers and hand muscles. It consists of an oval steel spring with a dial and index in the center. Compression of the spring is indicated on the dial in pounds and kilogrammes. This instrument is by no means accurate or perfect, as each succeeding trial may give a different reading according to the strength exerted by the patient. It is my practice to take the average of two or three compressions and this result I consider approximately correct.

For estimating the strength of the legs, several appliances have been suggested by Dana, Birdsall, Fèrè and d'Onimus, but none have enjoyed universal adaptation among neurologists. An apparatus which I have recently described,* approaches, in my opinion, the solution of this problem, and has received the appellation Pedo-dynamometer.

It consists of a wide heavy belt (*a*), its inner surface padded so that its adjustment around the waist will not be uncomfortable. A heavy webbing (*b*) is looped through the belt, passing over the shoulders, which helps to retain the belt in its proper position. A common

* *Neurologisches Centralblatt*, June 1st, 1893.

Mathieu dynamometer (*c*) is connected with the belt (*a*) by means of a strong adjustable strap, permitting it to be lengthened or shortened according to the stature of the patient. Connected to the dynamometer (*c*) is a stirrup (*d*), the base of which is padded for receiving the foot. Pressure exerted upon the stirrup will be registered upon the dial of the dynamometer, and the approximate strength of the extensors of the leg can be ascertained.

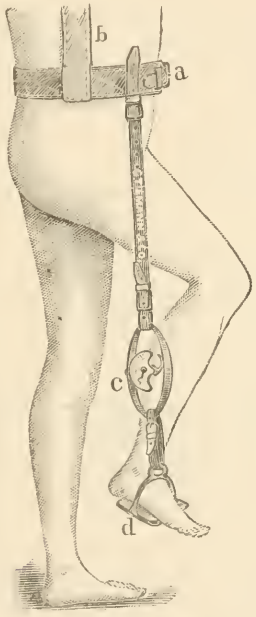

Fig. 1.

By lengthening the strap which connects the dynamometer with the belt (*a*), and flexing the foot on the leg as much as possible, then allowing the patient to push, the power of the extensors of the foot can be also determined. In applying the Pedo-dynamometer, the thigh should be flexed upon the pelvis, making an angle of 135 degrees, the leg flexed upon the thigh, making an angle of 90 degrees. It may be adjusted in the standing or recumbent position. By using snaps the dynamometer

can be quickly removed and used to measure the power of the hands.

In advanced cases the patient is very susceptible to changes of temperature, particularly from warm to cold, and in winter the atrophied members must be heavily padded to insure his comfort. In those cases where rheumatic pains have preceded the atrophy, and also in those cases of neuritic and spinal origin, there is some loss of sensation and other disturbances, but in the great majority of cases the general sensibility is unimpaired.

As a rule, pain is absent in muscular wasting, except in cases of neuritic and spinal origin, and here the pain is a neural pain and not a muscle pain. Pressure over the course of the inflamed nerves or on the spine will call forth sharp, shooting pains, whereas pressure applied to the muscle will elicit no complaint.

The objective signs offer the physician an important and interesting field for study and observation. His attention, as was that of his patient, is directed at once to the wasting or atrophy of the different muscles. The natural effect of this is to rob those portions of the body of their normal contour and beauty, and bring into prominence the underlying hard, bony structures. This wasting may be limited to a single muscle, to a group or system of muscles, may be unilateral or bilateral, general or localized, according to the cause and seat of the primary lesion. In estimating the extent of the atrophy, some more definite means are necessary than merely the sight or touch—and the tape measure is called into service.

A tape measure which seems to answer every purpose, and which has been cordially received by many neurologists, was described by me in the *Journal of Nervous and Mental Disease*, 1890, page 128. It consists of a tape (1) one meter long and one centimeter wide. The English scale is graduated on one side and the metric on the other. The head is supplied with a swivel (3) through which passes the free end of the tape, permitting

of uniform tension, greater accuracy in reading, and of its being held with one hand.

The second tape (2) is one-half meter long and one-half centimeter wide, and is provided with a sliding head, through which the first tape passes. This tape is, therefore, at right-angles to, and movable upon, the first tape. It is also graduated after the English and metric scales. The object of this tape is to ascertain at what distance from a certain fixed bony point the first tape has been applied, so that on succeeding occasions the measurement may be taken at the same point. To illustrate: If the

FIG. 2.

tape (1) be applied to the arm at a distance of seven and one-half centimeters from the internal condyle of the humerus (reckoned by means of tape 2), it is obvious that on succeeding occasions, or in comparison of the two extremities, the tape (1) must be applied at exactly the same point, thus excluding all possible chance of error.

My manner of using the tape is as follows: For the upper arm I select the internal condyle of the humerus as the fixed point. Then measure off seven and one-half centimeters with tape No. 2. At this point the circumference of the arm is taken by means of tape No. 1. In

like manner the circumference of the arm is noted at distances of fifteen and twenty-two and one-half centimeters from the fixed point. For the lower arm exactly the same procedure is followed, beginning at the proximal end and taking the circumference at seven and one-half, fifteen and twenty-two and one-half centimeters from the internal condyle. For the hand a distance of ten centimeters is measured from the tip of the median finger, and the circumference taken at this point.

For measuring the circumference of the leg, I employ the internal condyle of the femur as the fixed point, and take measurements at seven and one-half, fifteen, twenty-two and one-half and thirty centimeters respectively from the internal condyle. In taking the circumference of the abdomen or thorax, I choose the umbilicus as the fixed point.

The atrophy of muscular fibers and the hyperplasia of the connective tissue lead to contraction of the latter, and permanent contractions and distortions of the body and extremities result; the same is produced if a system of muscles become affected and the opponents, remaining intact, predominate. The peculiar shape of the hand in the Duchenne-Aran type, sometimes called "main en griffe," the turkey gait in the myopathic forms, etc., are examples of this kind.

The integument of the atrophied members has a shrivelled purplish appearance, and the finger-nails lose their pinkish tint. Other trophic disturbances, except in atrophies due to a neuritis, are wanting.

In many cases a fibrillary contraction, wave-like in appearance, propagated in the direction of the fibers, may be observed occurring either spontaneously or by gently tapping the muscle. This fibrillation, as it is termed, is of short duration, returns after an interval of a few seconds, may be limited to a muscle or part of a muscle, or may extend over the whole of the affected part or member. It is not pathognomonic of progressive muscular atrophy, as was formerly supposed, but has been observed

in other affections of the muscular system, and even in the healthy muscle.

Loss of Myotatic Irritability.—Tapping a healthy muscle produces a slight contraction of the fibers, which calls forth the performance of its function. In the diseased muscle the reflex arc is broken, the centripetal-sensory path remaining undisturbed, while the centrifugal motor path is broken. The loss of tendon reflexes, in some forms, occurs quite early, even before any serious damage has taken place in the muscular fibers. The patellar and elbow reflexes are the ones most generally examined.*

Electrical Irritability.—To Duchenne (de Boulogne) must be given the credit of having first employed electricity as a diagnostic and therapeutic agent. His method of localizing the electrical current, published in 1850, has served as the foundation for all later electrical researches in medicine. The elder Remak appeared against him, disputing some of his conclusions, particularly as to whether the contraction of the muscle was produced by irritating the bulk of the muscle, or the entrance of the motor nerve into the muscle. Von Ziemssen, taking advantage of this breach, made experiments upon dying patients, and, by careful dissection afterward, discovered that the motor points were those points where the motor nerve approached nearest the surface. (1857.) The natural law of muscular contraction under the influence of the galvanic or faradic currents, shows the superiority of the cathode pole over the anode, the contractions being short, sharp and quick. The wasted muscle presents changes of electrical irritability dependent upon the degree and extent of the degeneration. Erb and V. Ziemssen conducted a series of experiments upon diseased muscles, and arrived at practically the same conclusion at exactly the same time—1868.

Their law, called the Entartungs Reaction, reaction of degeneration, is as follows: First degree, or partial

*See Author's paper on "Tendon Reflexes," *Buffalo Medical and Surgical Journal*, December, 1892.

reaction; faradic and galvanic nerve irritability preserved, but weakened; faradic and galvanic muscle irritability preserved, but the contractions, instead of being short, sharp and quick, are slow and vermiform. In the second degree, or complete degenerative reaction, the galvanic and faradic nerve irritability and faradic muscle irritability are lost, but the galvanic muscle irritability is increased.

The action of the poles is, however, reversed, the anode closure contraction being greater than the cathode closure, and thirdly, the contractions are slow and vermiform. In the third degree, or severe type, there is entire loss of galvanic and faradic nerve and muscle irritability. Any one of these three degrees may be present, according to the seat and character of the primary lesion. Of these symptoms, the wasting and weakness are the only ones which are truly pathognomonic. The others, which are characteristic, are present in some forms of muscular atrophy, and absent in others.

Diagnosis.—To diagnose a case correctly, two essentials are necessary: First, a thorough knowledge of the symptoms, and second, a good working classification in which each particular variety has its only and proper place.

The study of the tumors was vague and unscientific until Virchow proposed his peerless classification. Charcot's classification of the different forms and symptoms of hysteria has brought order out of chaos, and the study of hysterical affections is to-day more advanced and scientific than many of the older recognized diseases. Therefore I hold that to be able to diagnose correctly the different forms of muscular atrophy, symptomatically considered, one must have at command a classification based upon the underlying pathology. A classification which has served me well was described by me in the *Buffalo Medical and Surgical Journal* for April, 1891, and is here appended, with but one or two slight changes:

- Muscular Atrophy.
  - Developmental.
    - Aplasia.
    - Hypoplasia.
  - Physiological.
    - Active.
      - Senile Wasting.
    - Passive.
      - Diminished Nutrition.
      - Defective Assimilation.
      - Febrile Processes.
      - Direct Traumatism, etc.
  - Pathological.
    - Functio Lesio.
      - Anchyloses.
      - Surgical Appliances.
      - Hysterical Contractures, etc.
    - Neuropathic.
      - Spontanic, Secondary, Traumatic, etc.
      - Toxic.
      - Infective Processes.
      - Arthritic.
    - Myopathic.
      - Scapulo-Humeral. (Erb's Juvenile Form.)
      - Facio-Scapulo-Humeral. (Landouzy-Dejerine.)
      - Paralysis Psuedo-Hypertrophic.
    - Myelopathic.
      - Acute.
        - Poliomyelitis acuta Infantilis.
        - Poliomyelitis acuta Adultorum.
      - Chronic.
        - Protopathic.
          - Hand Type. (Duchenne-Aran.)
          - Peroneal Type. (Charcot-Tooth.)
        - Deuteropathic.
          - Amyotrophic Lateral Sclerosis.
          - Syringomyelia.
          - Gliomatous Growths.
          - Locomotor Ataxia.
          - Multiple Sclerosis.
          - Diffuse Myelitis.
          - Myelo-Myelitis, etc.
    - Cerebropathic.
      - Cerebral Palsies.
        - Monoplegia.
        - Hemiplegia.
        - Diplegia.

The different forms of developmental defects have been sufficiently considered in another part of this paper. Under the head of physiological atrophies are placed two forms, the active and the passive. To the active atrophy is classed senile wasting or the retrogression of old age. This form is more or less general, affects all organs and tissues and has but one termination, the result of all decay—death.

Belonging to the passive atrophies, or those processes which are the result of disorders of the constructive organs, may be mentioned the wasting of the tissues following diminished nutrition, defective assimilation, febrile processes, constitutional diseases, malignant growths, etc. The atrophy is general, attacks no particular group of muscles, tissue waste is greater than tissue repair, and the atrophy continues until a reaction sets in, when the primary affection either goes on to recovery or to a fatal termination. The diagnosis of this group is simply the

diagnosis of the fundamental disease. No attempt need be made to treat the functional atrophies, *per se*, as in the great majority of cases they are passive, dependent upon disorders of the system, which when relieved permit the atrophies to disappear.

Pathological atrophies are either atrophy of inaction, (functio lesio) or tropho-neurotic. The former can hardly be classed as pathological, less physiological. They result when the functional activity of the cells is interfered with, and the nutritive changes are therefore diminished or abolished. As a result the member grows smaller and weaker and continues so until the cells regain their normal activity. Under this head we meet atrophies due to anchyloses, surgical appliances, hysterical contractures, etc. I have seen the arm reduced to skin and bone in cases of hysterical contracture, and although the rest of the body was well nourished and developed, still the unused extremity was in a state of extreme atrophy. It is a simple matter to diagnose such muscular wastings because they are local, the cause is so very apparent and symptoms pointing to complications are generally absent. No pathological lesion can be found except a diminution in the bulk of the muscle fibers. The treatment of these cases is very satisfactory.

The tropho-neurotic atrophies are pathological and their causes may be sought for in some disturbance along the course of the peripheral nerves, spinal cord, brain or muscles. These atrophies have a distinct and clearly definable pathology, and are accompanied by symptoms indicative of organic lesion permitting of accurate diagnosis.

Neuropathic Atrophies.—Inflammatory conditions of the peripheral nerves are productive of muscular wasting along the course of the nerves. This class of atrophies may be termed neuritic or neuropathic. If the atrophy follows a neuritis, as in acute simple neuritis, multiple neuritis, endemic neuritis, hemiatrophia-facialis, or a neuritis consequent to trauma, pressure, chemical or

thermal irritation, or secondary to some inflammation of a neighboring organ, it is always accompanied by the general symptoms characteristic of nerve inflammation.

Toxic Atrophies.—Agents which have been instrumental in setting up a neuritic process and consequently wasting of the muscles are, alcohol, lead, arsenic, mercury and bisulphide of carbon. The atrophy is generally limited to the extensor muscles, as seen in alcoholic paralysis, lead palsy, arsenical pseudo-tabes, and on eliminating the poison from the system the atrophy sometimes disappears.

After Infective Processes.—Following upon an acute attack of diphtheria, variola, typhoid, typhus, cerebro-spinal meningitis, etc., atrophic changes may take place in some of the muscles of the body. The lesion is generally neuritic, the atrophy either the simple or hyaline degenerative, the latter especially in typhoid, variola and cerebro-spinal meningitis, etc. In typhoid fever, typical hyaline degeneration of the rectus abdominis and abductors of the thigh may frequently be met with.

Arthritic Atrophies.—Following injury to joints, atrophy of the muscles moving that joint, but more especially the extensors, is often observed. If the hip joint is the seat of injury there is atrophy of the glutei; if the knee, the rectus femoris; if the ankle, the gastrocnemius and soleus. The wasting is quite often pronounced and persistent, with little, if any change in the electrical irritability and increased tendon reflexes. The seat of the lesion is purely hypothetical. Vulpian, Charcot and others believe that the articular centripetal nerves convey the irritation to the gray matter and particularly to the motor cells of the ventral cornua, thence conveyed to the muscles of the joint through the efferent nerves.

The diagnosis of these neuritic atrophies is not difficult, inasmuch as they are always accompanied by pain over the course of the nerves, trophic and vasomotor disturbances. The wasting is local, limited, generally of a severe type with marked electrical reactions, and, being

dependent upon a neuritic process, generally subsides upon cessation of the inflammation.

Of late there seems to be a disposition to classify another form of muscular atrophy under this head, namely, the peroneal type, commonly called the Charcot tooth type. Erb and Hoffman have recently published cases in which neuritic symptoms were present, such as sensory disturbances, marked electrical reactions, local distribution, appearance after infectious diseases, etc. Hoffman believes that this neuritis is secondary to changes in the ventral cornua. If this is really the case I see no reason why this type of atrophy should not be considered under the myelopathic forms. Sachs, who has studied this form of atrophy very thoroughly, is disinclined to accept Hoffman's ideas as to its pathology and relegates it to the spinal form of muscular atrophy.

The primary lesion in these neuropathic forms is to be sought for in the nerves supplying the affected muscles. The neuritis may be either interstitial, parenchymatous or degenerative. In the interstitial form the medullary sheath is broken into fine granules of fat and debris and absorbed. The axis cylinder is swollen, degenerated, and may be likewise absorbed. The nuclei of the sheath of Schwann become swollen and proliferate, leading to the formation of new connective tissue, which, after the period of regeneration, constitutes the bulk of the nerve fiber. The perineurium and endoneurium also take part in this process and become converted into thick layers of connective tissue.

The neuritic processes following the infectious diseases, especially diphtheria, afford good examples of the parenchymatous form of neuritis. Fig. 3 shows the oculomotorius nerve in a case of diphtheria, the seat of marked degenerative changes.* Many of the axis cylinders have disappeared, while others are smaller and have lost their sharpness of contour. The white substance of Schwann has

* See Author's paper on "Diphtheritic Paralysis," in *Neurologisches Centralblatt*, No. 17, 1888.

absorbed the staining fluid, indicating some changes in regard to chemical composition.

In discussing the various forms of muscular atrophy, we have only described diseases and conditions in which wasting of the muscles was a prominent symptom not by any means characteristic or pathognomonic. Other symptoms were always present which denoted more forcibly than the atrophy the seat of the disease or the cause of the wasting. In the following types the atrophy of the muscles is the predominant sign, so much so that these affec-

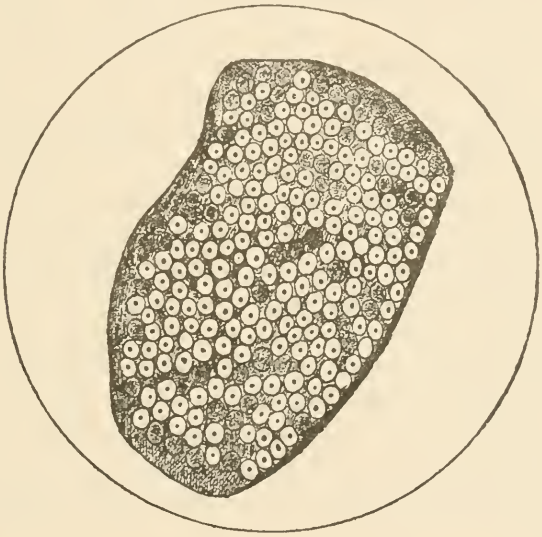

FIG. 3.

tions have been designated progressive muscular atrophy and progressive muscular dystrophy.

Myopathic Atrophies.—The myopathic forms of muscular atrophy are universally designated as progressive muscular dystrophy, after the recommendation of Erb, of Heidelberg. They include several analogous types, clinically and perhaps pathologically, although the focal lesion has not been ultimately determined. They develop in the young, are relatively rare and as yet the exact pathology is undetermined. Erb is of the opinion, recently expressed,

that there may be some slight changes in the ventral cornua as yet undiscovered, and that the myositis or lipomatosis is really secondary to organic changes in the nervous system.

Erb's juvenile form is the most prominent type of the myopathic forms of muscular atrophy. It usually begins in the muscles about the shoulder girdle, upper arm and back. The pectoralis major and minor, biceps, brachialis anticus, supinator longus, serratus magnus, rhomboidei, trapezius, sacrolumbalis, latissimus dorsi and longissimus dorsi are the muscles most often atrophied. The sternocleido mastoid, levator anguli scapulæ, coraco-brachialis, teretes, deltoid, supra and infraspinati, rectus abdominis and the small muscles of the hand remain undisturbed. The muscles of the lower extremities which are at times affected are the glutei, the quadriceps, the adductors, the peronei and the tibialis anticus. The sartorius, gastrocnemius and soleus remain as a rule unaffected. Occasionally hypertrophy of some of the muscles is observed, notably the deltoid, infraspinati, triceps, tensor fascii and muscles of the calf.

This type of atrophy affects several members of the same family, appears generally before the twentieth year, and has a decided preference for females. It is not accompaned by fibrillary twitchings, reaction of degeneration is not present, and the tendon reflexes are unimpaired.

Analogous to this type is the facio-scapulo-humeral type, first described by Duchenne as the *forme héréditaire;* but later more fully and minutely by Landouzy and Déjérine, in 1885. The wasting of some of the muscles of the face and hypertrophy of the lips give a peculiar tapir-mouth appearance to the patient, "*facies myopathique.*" With this exception, this type of atrophy corresponds exactly with Erb's form, and is regarded by many as one and the same.

Another form is the pseudo-hypertrophic paralysis of Duchenne. Although hinted at years before by Bell,

Meryon, Oppenheimer and Partridge, it remained for Duchenne, in 1851, to interpret correctly its clinical importance and establish it firmly in our nosology. It is no doubt hereditary, and occurs more frequently in boys than in girls. The important symptoms are weakness in the muscles of the leg and back, a waddling gait, an apparent increase in the size of the muscles of the calf, and sometimes thigh and calf. Furthermore, there is lumbar lordosis brought about by wasting of the muscles of the back and extensors of the thigh, some contractures, and a peculiar difficulty in rising from the ground. Repeated examinations of the nerves and cord have been unsuccessful, and hence the inference that the muscle itself is the seat of the lesion, although the notion is gaining ground that the real lesion may be located in the nerve centers, perhaps in the spinal cord.

To understand better the pathological changes occurring in the muscles, it may be desirable to review briefly the histology of a muscular fiber. A striated muscle is composed of a number of bundles, surrounded by a layer of areolar tissues, the external perimysium. Each bundle or fasciculus, enveloped by a thin, delicate membrane, the internal perimysium is composed of bundles of fibers, separated from each other by a delicate connective tissue, the endomysium. These fibers are arranged parallel to each other, are from two to four centimeters in length, and are united either to the tendons or aponeuroses, or else connected with the adjacent fiber.

Each fiber is composed of a number of filaments or fibrillæ, inclosed in a transparent homogeneous membrane, designated by Bowman, the sarcolemma. In the mammalia, elongated nuclei are present on the internal surface of this membrane. The primitive fibers are cylindrical or prismatic in form, about one-four-hundredth of an inch in breadth, and their length depends not so much on the length of the muscle, as upon the arrangement of the tendons. They are marked by transverse and longitudinal lines or striæ, giving them a characteristic,

striated or striped appearance. I will not take up the histology of the primitive fibrillæ, but will limit myself to the primitive fiber. (See Plate, Fig. 1.)

Each fiber has a vascular and nervous supply, the former being furnished by the ramifications of the capillaries, running parallel between the fibers. The nervous supply is from the motor nerves, and their termination in the muscle has been the subject of much controversy. The motorial end-plates of Kühne or nerve hillocks of Doyère are generally recognized by most recent observers. The nerve terminates below the sarcolemma, where the medullary sheath becomes blended with it, forming a plate or plaque which is raised somewhat from the fibers, but never encircles it. The axis cylinder is distributed to this plaque, but does not penetrate the interior of the fiber. The origin of the afferent or sensory nerve fibers in the muscle is still a matter of uncertainty.

Fatty infiltration and degeneration of the muscular fiber, as occurring in the myopathic form of atrophy, has been designated as myositis or lipomatosis. Here hyperplasia of the interstitial connective tissue and fatty infiltration follow closely upon the wasting of the muscle, and cause either no apparent change or else a slight increase in its volume. The muscle appears pale, yellowish, has a greasy feel, and resembles closely, not only macroscopically but also microscopically, a lipoma, or better, a myo-lipoma. Under the microscope, the large, round, yellowish cells, with dark borders, make up the greater portion of the tissue. Here and there a muscular fiber, with its transverse and longitudinal striation still intact may be observed. (See Plate, Fig. 3.)

The interstitial connective tissue is much increased in volume, with proliferation of its nuclei. The substitution of fat may be so pronounced as to give the muscle an hypertrophied appearance, and hence the denomination pseudo-hypertrophy, given this affection by Duchenne in 1861. In some forms of dystrophia the muscular fiber

may be even increased in volume, giving rise to real hypertrophy, a condition sometimes met with in idiopathic muscular atrophy.

Myelopathic Atrophies, or Atrophies Dependent upon Lesions in the Spinal Cord.—They may be acute or chronic. The acute forms are poliomyelitis acute infantilis (infantile paralysis) and poliomyelitis acute adultorum. Although not conclusively proven, still it is generally supposed that the onset of this type of inflammation is due to some infection. Cases are very common, both in the infantile and adult forms, where an infectious disease preceded the attack. I have reported a case occurring in a man forty-three years of age where the poliomyelitis was undoubtedly the result of measles.

The acute stage is ushered in by general *malaise*, headaches, pains in the back and limbs, fever, rapid pulse, somnolence, delirium, convulsions, and in a short space of time a general or partial paralysis sets in. After the decadence of the acute stage, the paralysis confines itself to one, rarely several, of the extremities. The muscles waste rapidly and show degenerative electrical reactions, the tendon reflexes are absent, trophic changes are present, but no disorder of sensation. If one of the legs be affected, the gait becomes very characteristic, owing to the atrophy and weakening of the peroneal muscles. The patient is obliged to throw the foot far forwards, the toes striking the ground first. Charcot calls these patients "*steppeurs*."

In the adult form the disease is not so liable to recede, and the affected members remain often permanently powerless.

The chronic forms comprise most of the chronic affections of the cord. They are divided by Charcot, according to the seat of the lesion, into protopathic, where the insult resides solely and alone in the gray matter; and deuteropathic, where the gray matter is only secondarily affected. Under the first head we have the Duchenne-Aran, or hand type, characterized by wasting,

beginning in the small muscles of the hand, as the interossei, superficial and deep muscles of the thenar and hypothenar, then extending to the flexors and extensors of the fingers, biceps, brachialis anticus, supinator longus, pectoralis major, trapezius, infraspinatus, supraspinatus, rhomboid, serratus magnus, latissimus dorsi and sometimes, though rarely, the flexors and extensors of the hip. The tendon reflexes are absent, fibrillary twitchings and altered electrical reactions are present. There are no symptoms indicative of trophic changes or disorders of sensation. This type of atrophy is the original form of progressive muscular atrophy described by Duchenne and Aran in 1848 and 1850.

In 1886 there appeared simultaneously from Charcot and Marie, in France, and Tooth, in England, the description of another form of atrophy. Its mode of onset is by attacking the muscles of the lower extremities, the extensors of the toes and the small muscles of the feet. As a result, there develops a double club-foot which is quite characteristic of this type. The peronei, the calf muscles and later on, the muscles of the thigh become affected. The muscles of the hand and fore-arm may become involved after a lapse of years, producing the peculiar "main en griffe" so characteristic of the Duchenne-Aran type. This form of atrophy begins, as a rule, in early life, is a family disease, attacks and progresses uniformly on both sides, produces a double club-foot, is attended at times with slight disturbances of sensation and vasomotor changes, and retains the tendon reflexes to a late stage.

The pathology of these forms has been the subject of long and earnest controversy. The peripheral or myopathic origin was stubbornly held by Friedreich and the German school, while Cruveilhier, Charcot, Lockhart, Clarke and others clung to the central or spinal origin theory. The latter is now the one universally accepted.

The ventral cornua of gray matter present the results of a subacute inflammatory process leading to complete or

partial destruction of the ganglion cells, sclerotic changes in the neuroglia, blood-vessel changes, cell proliferation, etc. The contraction of the newly formed connective tissue may even lead to the formation of cavities in the gray matter. (See Plate, Fig. 4). The ventral spinal roots are affected secondarily, likewise some of the efferent nerve fibers. Charcot's theory, then, is as follows: Atrophy of the muscular fibers is the direct result of irritation, which, beginning in the ganglion cells of the ventral cornua, is propagated through the ventral spinal roots and efferent nerves to the muscular fiber. Friedreich's theory was that the primary insult was a myositis with secondary changes as ascending neuritis of the peripheral nerve trunks, which terminated in a chronic myelitis

The pathology of the Charcot-Tooth or peroneal type is still *sub judice*. Hoffman, of Heidelberg, has studied this form very carefully, and has declared it to be of neuritic origin. He, therefore, has proposed to designate it "*progressive neurotic muscular atrophy*." Other observers still cling to the spinal theory, and until definitely proven by careful microscopical examination that it is primarily a disease of the peripheral nerves, it may be classed among the atrophies of spinal origin.

I have under observation a case of this type of atrophy in which all the symptoms point to disease of the ventral cornua of the spinal cord. Sensory disturbances and vasomotor troubles, symptoms of neuritic processes, are entirely wanting.

The pathological changes found in the atrophied muscles in the myelopathic forms correspond to simple degenerative atrophy. To the naked eye there is little to be seen save the diminution in size, and the pale, pinkish hue of the fibers; to the touch, a soft spongy feel, with occasional cord-like prominences, instead of a firm, resistant mass. The entire muscle, if carefully removed, will be found shorter than normal, owing to the contraction of the interstitial connective tissue. Under the

microscope the condition is as follows: If the atrophy is not too far advanced, the fibers retain their normal appearance—transverse and longitudinal striation—but are somewhat narrower. As the process advances, the fibers split up into longitudinal fibrillæ, or transversely into discoid masses and then gradually disappear. In other cases fatty and vitreous degeneration may occur, and the fiber then has the appearance of a sheath containing a clear material with some fat globules. The intensity of this process is not the same throughout the muscles, patches of healthy fibers may be found surrounded by others in different stages of atrophy, proliferative changes occur in the nuclei of the muscular fibers, and may lead to a new cell growth within the sarcolemma, replacing the contractile substance. Proliferation of the interstitial tissue also occurs and to such an extent as to separate the neighboring fibers. The entire muscle may, in fact, be converted into bands of connective tissue with some fat globules interposed between the separate layers. (See Plate, Fig. 2.)

The true designation of muscular atrophy, considered as a *morbid entity*, applies only to those affections in which progressive wasting of the muscles is the reigning symptom. As such Erb's juvenile form may be taken as a type of those atrophies in which no focal lesion has as yet been discovered in the nerve centers, but the muscle has been regarded as the seat of disease. As varieties, or deviations, may be mentioned the facio-scapulo-humeral type of Landouzy and Déjérine, and the pseudo-hypertrophic paralysis of Duchenne.

Secondly, those forms of myopathy due to a chronic anterior poliomyelitis, such as the Duchenne-Aran or hand type and perhaps the Charcot-Tooth or peroneal type.

The deuteropathic form comprises those affections in which the involvement of the gray matter of the cord is secondary: the atrophy following may be quite pronounced, as in amyotrophic lateral sclerosis, syringomyelia, and

bulbar paralysis. A careful examination is necessary at times to distinguish between the atrophy of these affections and progressive muscular atrophy; especially is this true of amymotrophic paralysis and syringomyelia. These affections stand in close relation to progressive muscular atrophy clinically and pathologically; nevertheless they can be diagnosed by symptoms which are more or less pathognomonic. In amyotrophic lateral sclerosis the atrophy affects the muscles of the hand, arm, shoulder and back, simulating closely the Duchenne-Aran type of muscular atrophy. In exceptional cases the lower limbs become implicated. Contractures develop, especially in the terminal stage. The tendon reflexes are markedly exaggerated, locomotion is difficult, and what is very characteristic, the disease runs its course in two or three years. In regard to the duration and course of progressive muscular atrophy and amyotrophic lateral sclerosis there is difference enough to convince any observer that the two affections are distinct from each other. In regard to syringomyelia, although the atrophy resembles the distribution in the Duchenne-Aran type, still it is not so uniformly advanced on both sides, and the sensory and trophic disturbances which are always present enable one to make a differential diagnosis. In bulbar paralysis the focal lesion is of the same general character as in progressive muscular atrophy, but limited to the ganglion cells in the medulla and pons. Atrophy of the parts innervated by the cranial nerves will be the result; in rare cases this process may extend caudad, affecting the ganglia of the spinal nerves.

In locomotor ataxia, multiple sclerosis, neoplasms of the cord, diffuse myelitis and myelo-myelitis, the atrophy is less pronounced, inconstant and variable in its seat and intensity.

Lastly, cerebropathic atrophies, generally observed in the spastic paralysis of children and adults. The atrophy is limited to the paralyzed members, as in monoplegia, hemiplegia and diplegia. In the majority of these

cases the atrophy is slight, due more to the inactivity of the paralyzed member. The reaction formula is normal, and sensory disturbances are absent. In exceptional cases a high degree of atrophy may be present, due in all probability, not to the functio lesio, but to the lesions in the trophic centers of the cortex, the seat of which is as yet undetermined.

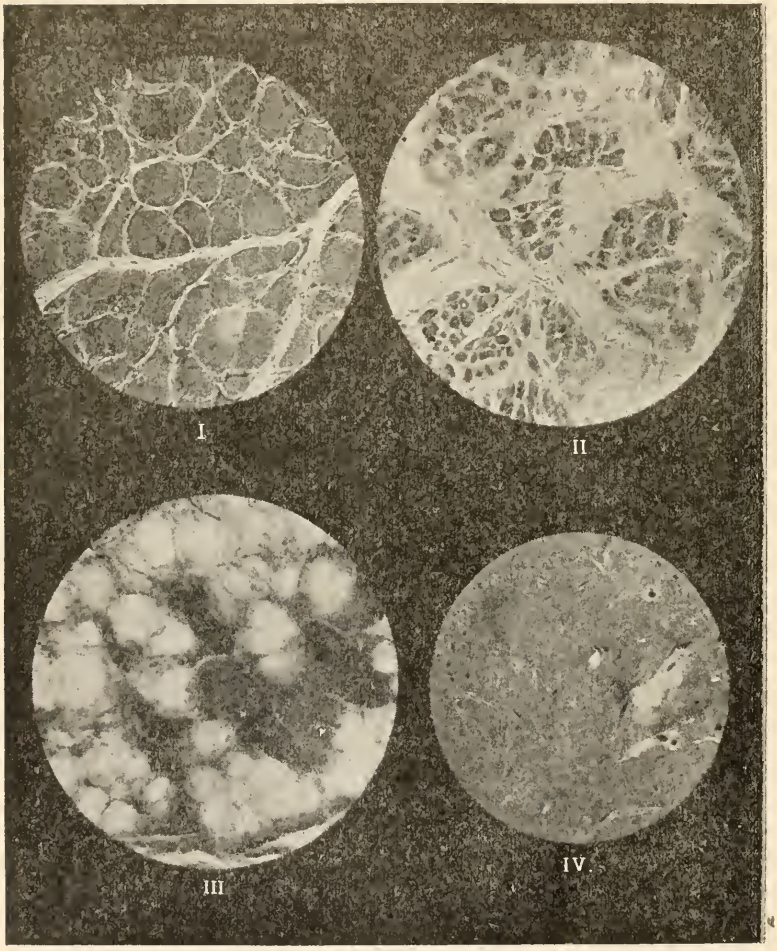

Fig. 4.

Illustration of Muscular Atrophies—Krauss.

EXPLANATION OF PLATE.*

FIG. I. Cross-section of a normal muscle. Zeiss' E, objective. No. 1 eyepiece.

FIG. II. Simple degenerative atrophy of a muscular fiber. Zeiss' E, No. 1 eyepiece.

FIG. III. Fatty infiltration and degeneration of a muscular fiber. Zeiss' E, No. 1 eyepiece.

FIG. IV. Destruction of the antero-lateral group of ganglion cells. Ventral cornua gray matter, spinal cord. The ganglion cells to the left (antero-median) are intact, while the antero-lateral have been replaced by cicatricial tissue. Zeiss' E, No. 1.

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* See Author's paper on "Muscular Atrophies," *Buffalo Medical and Surgical Journal*, April, 1891.

TRANSITORY FRENZY.*

A MEDICO-LEGAL STUDY OF THE GARVIN CASE.

By Theodore Diller, M. D., Pittsburgh,

Member of the American Neurological Association.

FRANK GARVIN, aged 24, was in Nov., 1892, tried for the murder of his wife, to whom he had been married but three days. The events in the young man's life leading up to the murder and the tragedy itself raised a medico-legal question as to the prisoner's sanity at the time of the murder.

The defendant was born in the country, on a farm, where he resided with his parents until the age of about fourteen, when, with other members of the family, he moved to Allegheny, where his father, for a time, kept a hotel. His father died shortly after coming to the city. Mrs. Garvin then moved to a quiet residence street. The family, at this time, consisted of the widowed mother, Frank, another son and three daughters. Across the street from the Garvin residence lived a family, a member of which, Cora Redpath, was destined to become Frank Garvin's wife. In an easy, natural way, they became acquainted when Frank was twenty years old, and the girl was sixteen.

Young Garvin became an artist and was employed on one of the Pittsburgh papers for several years immediately preceding the tragedy. He was very much liked at the newspaper office by both employers and fellow-laborers, and was regarded as exceptionally upright and honorable and slow to anger. At home he was the favorite son, being especially loved for his genial disposition and even temper. No one knew him to fly into a sudden fit of anger or passion. His love for his mother, brother and sisters was strong and natural. He was very temperate in the use of alcohol and tobacco, nor was he known to consort with lewd women. His life at home and at the

* Essay presented to American Neurological Association for admission to membership in Association, at meeting held at Saratoga, July 25, 1893.

office was such, that he was not generally suspected of being insane. At the trial, however, the following facts were shown :

1. He had during leisure hours worked on the problem of perpetual motion, and told a companion he had solved the question, and taken him to his home and shown him some works he had constructed. The companion told him that it would cost a great deal to get his machinery patented, and laughed over the matter. After this Garvin dropped the idea.

2. He told another companion that he had evolved a scheme for making a great sum of money. It consisted in constructing a huge monster from bones and flesh of dead animals (Schindery) from butchers' shops and burying it under the ground for a couple of years, then digging it up and exhibiting it as a great curiosity.

3. He ordered his tailor to make him a coat for street wear, patterned after a style intended only for house wear. His tailor thought he was "queer."

4. At a neighboring store, at which he often made purchases, he was thought to be "queer," so that the storekeeper disliked to wait on him.

5. For a long time he had made a critical study of the life and character of Napoleon, whom he regarded as his ideal and whom he attempted to imitate in manner, dress, etc. He posed for a picture, assuming an attitude which he believed to be Napoleonic. It was not shown that he ever really believed he was Napoleon.

6. Although possessing a superabundance of hair, which was never known to fall out, he one morning appeared before the family at breakfast with his hair saturated with vaseline so that it almost dropped from him. When asked the reason, he said he wished to prevent his hair from falling out.

Garvin's acquaintance with Cora Redpath, who was a very beautiful girl, grew into a strong affection, then into an illicit love. Whether or not he was the girl's seducer is not known. But the girl, in the eyes of Garvin's family as well as of the public, bore a shady reputation, and they looked with ill-favor upon his consorting with her. His brother (who seldom advised him), warned him against her. But all to no effect. The influence of the young woman over Garvin seems to have been most powerful. She often called at the newspaper office to see him. He made $18 or $20 a week and paid little

board at home, yet was always poor from supplying the girl with money. She went to Chicago with her father in Feb, 1892. While there she wrote Garvin frequently, protesting her love for him and declaring that he alone possessed it. At the same time she also wrote letters to same effect to other men. From the time Cora Redpath left Pittsburgh, Garvin became restless, uneasy and worried. He talked of going out to Chicago, but said little to his family, who, however, divined the cause of his changed manner. His appetite became poor; he lost much in flesh and became markedly impaired in physical health. He frequently wrote to Cora to come back. Finally she did—on Sept. 10th. The same day Garvin went home and said that he and Cora had been married. He did this to see how such an announcement would be received, well-knowing the disapproval of the family of the girl; but he was not at that time married. An incident which occurred on the evening of this same day well illustrates how intensely worried and preoccupied Garvin was. With a companion, he started from Pittsburgh to his home in Allegheny, a distance of a mile. Although usually talkative and companionable he did not utter a single word during the entire walk. His companion was so struck by this strange and unusual conduct that he became very suspicious and fearful of him as they neared their journey's end.

Two days later he did get married, and when the family learned that he had really made the girl his wife, they received her at home with Frank, offering them both a home, and treating them kindly. Immediately prior to marrying the girl, Garvin had extorted a solemn promise from her that she would be true to him alone and act as a faithful wife should. The past was to be forgotten.

The day after the marriage, he noticing a bracelet on his wife's wrist (a token among young folks of love), he endeavored to gently remove it, as he doubtless felt jealous of its being placed there by a rival. Cora permitted him to remove it as far as the fingers and then tauntingly slipped it back. The same day Garvin found a letter directed to his wife which he read. It was a commonplace note, but ended "Yours lovingly, Ed." The second day after the marriage he found upon examining his wife's watch, these words engraved, "Cora. From Ed."

The third day after the marriage, he went up to his wife's room after breakfast. She was there alone, getting ready to go away. Garvin asked her where she was going when she replied, that she was going to Pittsburgh to meet a man and that she must go alone. Garvin exhorted her not to go, beseeching her to remember her promise of faithfulness. She heeded him not but proceeded to put on her best shoes; Garvin rolled her on the bed and gently attempted to take them off. But she persisted; and going to the wardrobe selected her best dress. He asked her why she did not marry the man she was going to see if she liked him better than her husband. She replied that she did not like him better than Frank but liked his money. Garvin for a moment mutely contemplated his wife standing before the looking-glass and exclaimed—"Oh, Cora, but you are beautiful!" She replied, "No, I am not beautiful, but I don't care as long as I can make money."

The above conversation between Garvin and his wife was related by the defendant on the witness stand. Garvin asserted that after his wife's reply, he remembered nothing until he found his mother before him in the room, three-quarters of an hour after he had entered it. But a half-hour after he left the breakfast table and went up stairs to his wife's room, pistol shots were heard by the occupants of the house, Garvin's mother and sisters, and loud screams and shouts coming from both Garvin and his wife. His mother and sisters, who at once rushed to the room, found the young woman lying on the bed covered with blood-stains, while Garvin was running his hands through his hair and exclaiming, "My God! my God! what have I done!" He presented a wild unnatural appearance to his mother and sisters—looked "just like a crazy person." The officer who arrested him was taking him down the stairs, when Garvin requested to be allowed to go back into the room to take a last look at his wife. Being permitted to do this, he re-entered the room and threw himself on his victim's prostrate form, caressing and kissing it in a most passionate manner. He was then taken to jail in a patrol wagon,

offering not the least resistance to arrest. *He persistently stated that he was taken to jail in a street car, and was quite positive of it.* Only after he was placed in his cell did he (according to his own statement) realize what he had done. He then expressed the most pitiable regret for his deed. He said he was willing to expiate his crime on the gallows and desired to plead guilty in court. He persistently maintained his position. Only after considerable persuasion on the part of his attorney was he prevailed upon to promise to plead "Not guilty." A day or two after he entered the jail, it was discovered by the jail physician that he was suffering from gonorrhœa, which was supposed to have been contracted from his wife.

I saw him for the first time about one week before the trial. He spoke of many incidents of his past life and of events and occurrences in connection with the tragedy, but as to the actual shooting he professed to have absolutely no memory. He presented the appearance of one suffering from intense sorrow and depression, but expressed not the least concern for his own safety. He professed great love for his dead wife, and apparently unfeigned sorrow for his tragic deed. He said he cared not for himself but only for his mother, brother and sisters, who were compelled to suffer for his sake. He had taken a great deal to religion since his incarceration and was convinced that the world was a hollow mockery and a sham, and was very weary of living, and but for the additional pain it would cause his family he would gladly and cheerfully meet death. But he would not commit suicide, as he was sure that was wrong. Yet he saw no reason why he should not be hung. Although I diligently sought to elicit them, I could not find that he possessed any delusions or hallucinations. His manner and conduct was not inconsistent with that of a sane person, considering the circumstances. He certainly did not attempt to feign insanity.

At the trial he told his story most reluctantly, especially

where he was compelled to testify as to the unchaste character of Cora Redpath, and the unfaithfulness of Cora Garvin. At one time he utterly broke down and bitterly sobbed. Evidently his love for his dead wife and his desire to shield her character was very great.

When placed upon the witness stand as an expert witness for the defense, and asked whether in my opinion Garvin was sane or insane at the time he killed his wife, I replied that I believed he was insane, but that I could not say that he was insane at the time I examined him, nor could I say that he was sane.

The principal point hinged upon whether Garvin, at the time of the murder, was conscious and possessed of sufficient controlling power to abstain from shooting his wife. I believe that he committed the deed while in an unconscious state, and therefore while he was irresponsible and totally unable to control his actions, and, therefore, for the time being, insane.

If he were not unconscious at the time he committed the murder, then he was telling a lie and acting a part. That he was doing so seemed to me improbable. For his reputation for honesty, candor and truth was exceptionally good. He told a straightforward and consistent story when on the witness stand. In no respect was he shown to have testified falsely. But if he was feigning amnesia for the murder, believing that to be insanity or irresponsibility which would save him from the legal consequences of his deed, it seems to me that he would have assumed delusions, hallucinations or insane conduct. In a word, if he were feigning insanity it is most unlikely he would have taken that one sign alone. To believe he did so, we would be compelled to believe him possessed of critical knowledge of medical jurisprudence. He did not tell me in the jail, nor the lawyers in the courthouse, of this amnesia until it was extracted from him by questions—a point of considerable importance.

A question of lesser importance, but one of interest,

chiefly as bearing on the question of amnesia, was his love for his wife. That this affection before the tragedy was very great, was abundantly proven, notwithstanding his improper relations with her. It is therefore not assuming too much, I think, to believe that the regrets Garvin expressed for the tragedy subsequent to its enactment, were genuine. Therefore, assuming that he was filled with an intense and powerful love for his wife before her death, and for her memory after death, it follows that he must have been in a very extraordinary or unusual state when he killed her.

The fact that both Garvin and his victim were "shouting and screaming" at the time the shooting was done, is consistent with, and corroborative of, the theory that the deed was done while the actor was suffering from an epilepsy of the higher centers concerned in the maintenance of consciousness—a state like unto the psychical equivalent of epilepsy. This idea is further confirmed by the fact that when seen immediately after the tragedy, Garvin was making no attempt to escape, but was running his hands through his hair and exclaiming, "My God! my God! what have I done!" and presented a wild appearance, "just like a crazy man." His going back and passionately kissing his dead wife, could scarcely have been the acting of a part, and must be looked upon as consistent with, if not confirmatory of, the theory of amnesia. His stout and persistent assertion that he was conveyed to the jail in a street car, when, as a matter of fact, he went in the patrol wagon, is also significant.

Let us now look at the events which led up to the tragedy. Soon after the girl went to Chicago, Garvin, fretting, worrying and pining for her, began to run down in health. After her return and their marriage, he was worried because of his uncertainty as to how she would be received at home. There were probably other sources of mental anxiety. For three days before the tragedy he had scarcely eaten a single meal. Therefore,

at the time he killed his wife he was much debilitated in body and sorely distressed in mind. The terrible provocation of having his wife deliberately prepare in his presence to meet another man for immoral purposes, was a shock well calculated to act as an exciting cause and precipitate an attack of mental epilepsy characterized by amnesia, when we consider the predisposing causes of insanity present in his case. The watch, the bracelet and the letter incidents, led up to the events which precipitated the final crisis.

The facts given of Garvin's early life, not connected with the tragedy, are of considerable interest in view of his crime. Taken together they may not be enough to enable one to say he was insane before the crime, but observed in an individual they would at least cause one to suspect or question his sanity. Considered in connection with his crime, they are of interest in Garvin's case, as showing an unstable or erratic mental action. Considered in connection with his conduct, physical and mental condition just prior to the murder, they furnished corroborative evidence in support of the view that he was in a state of transitory frenzy at the time of the killing.

The prosecution argued that Garvin's transitory frenzy was simply an attack of violent jealousy, and that his amnesia for the killing was feigned. But no expert testimony was introduced. True enough, the element of provocation was in the highest degree present, but it is well established in psychiatry that provocation does not preclude the possibility of an act being an insane one.

In charging the jury, Judge McClung said:

> The law presumes all men charged with crime sane, and the burden of the proof of insanity rests on the defendant. If you are convinced that the defendant was insane just before the commission of the crime, and sane immediately afterward, which is called transitory frenzy by the expert, you may acquit him on the ground of insanity. But expert testimony should not be allowed to enter into a case if it sets aside the good, hard, common sense of the jurors. Between the two let us retain the good, common sense. It is the essential feature of our jury system.

Thus it will be seen that the judge viewed with

extreme caution, if not with distrust, the plea of temporary insanity. Considering the difficulties in the case, and viewing it from the Court's stand-point, the judge's charge cannot greatly be criticised. It was such a charge that might have been expected. The jury rendered a verdict of voluntary manslaughter, and the prisoner was sentenced to nine years' imprisonment.

Certainly it is a difficult matter for a jury to decide that a man who commits a crime was insane at the time he commits the act, when it cannot be shown that he was insane before or after the crime. Yet the argument I advanced in Garvin's case was by no means a new one, although some of the members of the legal profession seemed to so regard it. If there is such a thing (and I believe there is) as psychical epilepsy, originating in the cortical areas which are specially related to the emotions and intelligence, it seems to me that the circumstances in Garvin's life leading up to his crime, the crime itself, and his conduct subsequent to the crime, would strongly indicate that he committed the murder while in such a state.

In connection with this case it will be profitable, I think, to review the subject of transitory frenzy, especially in its medico-legal bearings.

Spitzka defines transitory frenzy thus:*

> Transitory frenzy is a condition of impaired consciousness, characterized either by an intense maniacal fury or a confused, hallucinatory delirium, whose duration does not exceed the period of a day or thereabouts.

He goes on to say:

> Numerous instances are recorded where persons previously of sound mental health have suddenly broke out in a blind fury or confused delirium which, passing away in a few minutes or hours, left the subject deprived of a clear, or of any, recollection of the morbid period, and generally concluded with a deep sleep.

Kiernan reports the following case:

A prisoner made a sudden, violent and unprovoked

* "Manual of Insanity," page 154.

attack on the other prisoners and their keepers while at supper. Transferred to a cell he became violently maniacal, continuing thus for two hours, and then fell into a slumber lasting an hour and a half. In the course of the next fourteen hours he was transferred to an asylum and was found lucid, though slow in speech, and had a perfect recollection of everything that occurred up to the time when he went to get some salt at the table. The next thing he recollected was finding himself in a cell.

Another patient's history is reported by the same writer (rendered the more valuable as the reporter was an eye-witness of the attack itself):

The subject had had a quarrel with her betrothed, after physical exhaustion following night watching at her mother's bedside. On going to another apartment, after the quarrel alluded to, she found that two live coals had fallen on a dress which she had been occupied in sewing for two days, and which some one had placed near the fire. Hereupon she fell into what was apparently a violent rage, tore the dress to pieces, attempted to smash the furniture, and continued violently excited for an hour, when the reporter saw her. She was then in a condition of intense frenzy; said the doctor was so dark he must be the devil, and made two assaults upon him and continued destructive. After being treated with restraint and the cold pack she fell into a deep sleep, on awakening from which she was perfectly rational, and recollected nothing that had occurred subsequently to the discovery of the fact that her dress had been spoiled.

Kiernan's summary of the cases of Calmeil, Tardieu, Le Grand du Saulle, Marc, Hoffbauer, Krafft-Ebing, Griesinger, Pick, Ray, Rush and numerous others is as follows:

That transitory mania is an ordinary form of acute mania characterized by the brevity and explosive violence; that it occurs in persons sane prior and subsequent to the attack, rarely relapses and seldom lasts over six hours; that there are no apparent prodromata, and no *sequelæ* other than the slumber and turgidity of the hands; that the predisposing causes are hereditary and an excitable temperament; that the exciting causes may be alcoholic excesses, physical exhaustion, violent emotion, and mental strain, and that the disorder tends of itself to recovery.*

* Quoted from "Spitzka's Manual of Insanity," pages 156–7.

Spitzka takes issue with those who argue that transitory frenzy should be classed among the epileptic disorders. But it seems to me the similarity is most striking, failing, however, in the matter of their frequency of occurrence. Epilepsy occurs frequently, transitory frenzy but once in the life-time of an individual. Epilepsy is due to a sudden vicarious discharge of motor nerve cells, due often to disease of the angular cells by which they are normally inhibited. The psychical epileptic equivalent, which may occur seldom or indeed but once in the life-time of an individual, can most plausibly be explained by a similar morbid physiological process.

A short time ago, I placed on record a case of transitory frenzy which never got into the courts. The case was briefly as follows:*

A young German, aged 28, who lived with and supported his widowed mother, whom he loved and cherished, one day suddenly became greatly excited and attempted to do violence to those about him. He accused persons of trying to murder and poison him, and was with difficulty restrained by half a dozen men. He was given morphia and recovered his normal condition only the next day. He had no recollection of the attack whatever and was greatly pained to learn that he had inflicted injuries upon his mother.

Just prior to the attack he had become greatly debilitated through an attack of influenza.

As there was no motive in this case it never got into court, and there is every reason to believe the amnesia was real.

Dr. J. M. Bell† relates the following case:

A farmer, aged 45, who had previously been perfectly healthy became insane one night after a hard day's labor in the hot harvest field. Shortly after midnight following the day in question, he began to dictate his will and became "threatening and very talkative. He kept his arms revolving around each other and was talking so

* Alienist and Neurologist, April, 1892.

† *Therapeutic Gazette*, 1889, page 738.

rapidly and incessantly as to froth at the mouth. He seemed to be perfectly conscious, recognizing and speaking to every visitor." His language was slanderous and untruthful. He frequently made rhymes. He remained in this condition over eighteen hours, when he began to improve and was as well as usual in a week, but remembered nothing he had said during the attack.

Salemi Pacè* records a case of what he calls transitory mania, occurring as follows:

A field guard, aged 32, was put on trial for his life, for the murder of a young woman with whom he had been in love since 1885. It seems that for two years the affection between the defendant and the young woman whom he murdered was mutual. Then the girl began to tire of the defendant, who however would not cease his attentions to her and even began to threaten her, when she actually cast him off. Several times he attempted violence upon her. It was agreed that the girl should return the presents which the defendant had given her. At the sight of these gifts the defendant "had an attack of delirium, beating his head with stones in a most pitiable fashion." Some time after this he quieted down and married another girl.

But he did not forget his first love. One day as she was passing his house with her mother in a religious procession he rushed upon her and plunged a razor into her neck several times. When arrested and led away he licked his hands and exclaimed, "Oh, how sweet is the blood of the virgin!"

In court he claimed to have committed the deed unconsciously, because he had been abandoned by his lover.

The defendant claimed that the girl spit at him and that this provoked the assault. But this was not proven. He told the judge that he had no memory of the assault, but before the medical experts he admitted the contrary. Before the tragedy he had never shown any signs of mental unsoundness—not even of marked eccentricity. He was of a gay disposition, a friend of music and entertainments, generally in good health. Attacks came over him with the suddenness of an explosion, and he at first claimed to have no consciousness of what he had done.

* *Il Pisani Gazetta Sicula.* *Vide* abstract in ALIENIST AND NEUROLOGIST for July, 1893.

Defendant, being illiterate, the author argues, he could not have had knowledge of the penal code and feigned amnesia to escape punishment. Sleep did not follow the attack, and amnesia could not, in view of the defendant's contradictory statements, be established. So two of the characteristics of a typical attack of transitory mania were absent. The author holds that this does not invalidate the theory, and to sustain himself quotes Schüle, as follows:

> We ourselves observed in a recruit, who was hereditarily predisposed, after great hardships and an attack of acute gastritis, a very acute *raptus homicido*, followed by a condition of stupor lasting for some weeks, but without anxiety and amnesia.

It seems to me that there is much less ground for supporting the theory of transitory mania in Pacè's case than my own, principally because of the failure to establish the presence of amnesia in Pacè's case; yet I am not prepared to say that the crime committed by Pacè's patient is one for which the defendant should have been held accountable. But from a medico-legal stand-point the presence of amnesia will, where it can be proven with reasonable certainty, always constitute the chief reason for acquittal in cases where transitory frenzy is the plea. Without it the case may not be disproven but it will always be greatly weakened.

A condition similar to, or indeed, perhaps identical with transitory frenzy, called in India "running amuck," occurs in Malays. It is induced by emotional disturbances, such as fright, grief, etc., in those suffering from physical, mental and nervous depression. The attack comes on suddenly and is characterized by sudden and violent excitement, lasting from a few hours to a few days, during which the individual may do great violence to those about him. There is amnesia for the paroxysm and intense regret for injuries or crimes committed during it.

Recently a talented painter, modest, gentle and kind, a model father and husband, living in every way an exemplary domestic life, was seized with a sudden and violent

paroxysm of homicidal mania, during which he killed his wife and mother-in-law and wounded his brother-in-law, and with smoking revolver in hand, threatened to kill all those about him. A few moments later he realized what he had done and knelt by his victims, prostrated with grief and remorse. The discovery of his wife's infidelity had been the exciting cause of the unhappy artist's crime.

At the trial, which occurred in Paris, the plea of "running amuck" was set up, and was shown by the circumstances of the crime and the occurrences immediately preceding and succeeding it, to have been well founded. The accused was acquitted.*

W. Gilmore Ellis, in a most interesting article entitled "The Amuck of the Malays,"† relates two instructive cases which occurred in Singapore:

Case I.—A Bugis trader attacked, without the least warning, the man in whose house he was staying, inflicting several severe wounds with a long knife. He then jumped out of the window and entered an adjoining house where several persons were asleep, and stabbed two of them, the others escaping. He then ran out on the street, stabbing a person at the doorway and several more in his wild run down the street. He was finally arrested, having a hunted and excited expression on his face. When spoken to about the amuck he always stated that he remembered nothing about it even after he was committed to the asylum, where he knew a confession could make no difference.

Case II.—A man named Nyan came to Singapore with a party and secured permission to lodge with Noor, a native. In this house, another inmate, Mahomet, while quietly eating fruit one evening was attacked by Nyan without the least warning, but finally managed to escape. Nyan then entered Noor's room and cut off his hand; then into another room where there were two persons, one of whom escaped by jumping from the window; the other was fatally wounded by Nyan. He was finally captured and was quiet and rational when examined a short time

* See Editorial *Universal Medical Journal*, March, 1893, page 94.

† *Journal Mental Science*, July, 1893.

afterwards. He had had no quarrel with any of his friends, who were unable to account for the outbreak. Nyan stated that he overheard his friends say he was not fit to live. He persistently stated that after seeing everything red before him he remembered nothing until he found himself in the hands of the police. At the trial he was found to be insane and sentenced to be detained during Her Majesty's pleasure.

Dr. Ellis further says:

Personally, I believe all Malays consider imprisonment for life a greater punishment than execution by hanging. If malingering, would they, one and all, deny their insanity?—would they months after the crime and trial, with no fear of further punishment hanging over them, still persist that they remembered nothing of their criminal acts, and with such an air of telling the truth? They remember that they were depressed, that they were upset, that they suffered from grief—in fact, that their affective nature was at fault. Many of them speak of having seen red, of having been giddy, or of their eyes having been turned inwards, but then comes the blank. In a few hours to a few days after the amuck these afflicted individuals go back to their normal state, passing through a state of sullenness and apathy, into which they are liable to relapse for months afterwards if questioned as to their outbursts.

This writer further observes that ordinary epilepsy and alcoholic indulgence are rare among the Malays. He believes that

In some Malays strong emotions bring on sudden paroxysms of acute homicidal mania, due to disturbance in the sensory centers, *i. e.*, masked epilepsy.

He further observes:

It may be that the amucker in some few instances willfully allows his emotions full play when he might control them, desiring to die, and knowing that the culminating point will be amuck; on the other hand, in the majority of instances the impulse to amuck is sudden and uncontrollable.

While preparing this paper the following case occurred and was brought to my notice:

A young man in Allegheny, aged 28, was seized with an attack of sudden maniacal fury. At nine o'clock of the evening of the day preceding the outbreak he was engaged in ordinary conversation with a party of friends. He

retired as usual that night. An hour or two after midnight loud noises and confusion were heard emanating from his room, which when opened was found to be in direst confusion. The young man, who was alone in the chamber, had smashed much of the furniture. He had broken the looking glass with his fist, and suffered in consequence with many bleeding cuts on the hand. The united efforts of five men were required to remove the unfortuate man (who was all the while shouting incoherently and struggling violently) to the police station. He was placed in a cell at five o'clock in the morning. A friend called to see him at eight o'clock the same morning. The police officer in charge said, "You can see him but you will make nothing out of him, for he is the craziest man I ever saw." The friend went to the cell and found the unfortunate prisoner with cut hands and torn clothing, but apparently quite sane. An hour later he was released, since which time he has appeared to all his friends perfectly rational. He appears to have a confused memory for the excited period. Just prior to the outbreak he had for some time been greatly worried by domestic and financial troubles and was considerably run down in health.

Maudsley says:*

Although epilepsy, masked or overt, will, I think, be found at the bottom of most cases of mania transitoria, it must be admitted that there are some cases in which no evidence of epilepsy in any of its forms is to be found; but it may well be doubted whether a distinct neurosis is not always present in these cases. With such a constitutional predisposition, a genuine attack of acute insanity, lasting for a few hours only, or a few days, may break out on the occasion of a suitable exciting cause, and during the paroxysm, homicidal or other violence may be perpetrated.

Bevan Lewis says:†

In the masked epilepsy of older writers, we find that a fit of homicidal mania may replace the convulsive seizure, a convulsive idea (as Maudsley would say) takes possession of the mind, and without any of the usual epileptic phenomena preceding a sudden irresistible murderous impulse (probably prompted by delusion or hallucination) occurs; but here again the subject fails to recall any conception of his actions. So likewise in the dreamy state of epileptics, approaching the somnambulistic condition, homicidal acts have been committed in a semi-unconscious,

* "Responsibility in Mental Diseases," page 247.

† "Mental Diseases," page 186-7.

automatic state of mind. It is astonishing how complicated may be the acts performed in these states by the epileptic automaton.

The brutal instincts are less protected in those persons of weak mind, who, not endowed with an average amount of controlling power, require but the intensification of such instinctive states to lead to explosive outbreaks. In such cases mental strain, anxiety, ill health and other exhausting conditions, and especially alcoholic and sexual intemperance, may readily lead to attacks of homicidal mania at periods when the public mind is horrified by some startling crime.

Transitory frenzy must not be cofounded with imperative conception or homicidal impulse, where a desire to murder or commit a criminal act seizes the mind, which the subject feels and knows is wrong and yet which, for lack of inhibitory control he may be unable to resist performing. These insane promptings may be repeatedly resisted, indeed may never terminate in a crime. Many interesting and instructive cases of this sort are on record. These perverted feelings or desires are, perhaps, most frequently seen in epileptics, who are generally changeable, impulsive and erratic to some extent. Where a homicidal or other criminal act is performed by an epileptic, far less difficulty is experienced in showing that the act was an irresponsible one because of impaired or abolished inhibition. Epileptics in the post-epileptic state, or during the "psychical equivalent," have committed crimes of which they had absolutely no memory afterwards. Therefore such cases cannot be said to have committed their crimes because of insufficiency of inhibitory power to control the homicidal impulse or imperative conception which arose in their minds. They were automatons suffering from convulsive ideas, the attacks being very analogous to the motor explosion which we call epilepsy; and, as I have already stated, I believe it is reasonable to suppose they are due to an analogous brain condition.

Where a crime is committed during an attack of transitory frenzy for which the perpetrator alleges amnesia, it is, of course, a matter of prime importance to determine, if possible, whether or not this allegation is true or assumed. To determine the reality of a subjective symptom where

a crime is involved is by no means an easy task. It can, perhaps, never be determined with absolute certainty. But where the expert is called upon to give his opinion, it devolves upon him to give, when possible, an opinion one way or the other, even if done in a qualified way. No set of fixed rules can be given. Each case must, in the nature of things, form a study of itself. But every case well studied must be helpful to others called upon for opinions in similar cases. A few general lines of inquiry might be laid down as follows:

As tending to credit the amnesia would be

a. Family history of insanity, epilepsy or other psychoses or neuroses.

b. Mental or moral instability.

c. Existence of epilepsy.

d. Truthfulness of accused, especially for circumstances connected with the crime.

e. Absence of attempt or desire to feign insanity.

f. Absence of motive for crime.

g. Genuine regret for crime, with willingness to suffer penalty.

h. Presence of predisposing and exciting physical and mental conditions favorable to an outbreak of transitory frenzy.

i. Wild and excited manner of committing the crime.

j. Absence of design or attempt to escape.

Garvin never had epilepsy. No insanity in his family except an uncle who became affected late in life. He certainly had the greatest motive for his crime. If we except these circumstances, his case presented all the foregoing points, showing that his amnesia was real. The presence of a reasonable motive for the crime was, of course, the greatest stumbling block in the way admitting the amnesia built upon a hypothesis of transitory frenzy. The process of reasoning by which I arrived at the conclusion that the amnesia was real has already been given in sufficient detail. Absence of motive is, of course, strong presumptive evidence of innocence; yet

the presence of a motive is by no means conclusive evidence of guilt.

It would be foreign to the purpose of this paper to discuss the legal definition of insanity. My desire has been simply to analyze the Garvin case and to make some slight review of the literature of transitory frenzy in the hope of exciting a discussion which will throw some light on an interesting but difficult subject.

SELECTIONS.

CLINICAL NEUROLOGY.

Vasomotor Ataxia.—Dr. S. Solis Cohen, of Philadelphia, read an abstract of a paper on this subject, before the Section in General Medicine of the Pan-American Medical Congress. He said that by the term vasomotor ataxia he proposed to designate the condition of instability of the mechanism of circulation present in certain persons and characterized by abnormal proneness to disturbance, with tardiness of restoration of the equilibrium of the cardio-vascular apparatus. The manifestations of these conditions were most strikingly displayed in the terminal vessels, and occurred chiefly under the action of external influences. The stimulus might be applied centrally or peripherally, but in each case the resulting phenomena indicated a defect of central inhibition. Vasomotor ataxia was in many cases congenital, in some inherited, and it was not uncommon to find it present in several members of a family. In some cases the phenomena were paretic and in others spasmodic in character. Usually the two kinds were displayed in varying degree in the same patient; it made no difference, however, whether spasmodic or paretic, the symptoms were suggestive of inco-ordination. In exophthalmic goiter, especially such as were produced by emotion or were markedly intermittent, was found the extreme type of the paretic variety of vasomotor ataxia. The form of Raynaud's disease known as "local syncope" furnished an extreme type of the spasmodic variety, while "local asphyxia" exhibited both spasmodic and paretic phenomena. Between the extreme there were numberless gradations down to the slighest departure from the normal. Even the extreme symptom groups represented merely exaggerations of phenomena that, under certain conditions, occurred in normal individuals. Dermographism was an essential feature of vasomotor ataxia, and in most cases factitious urticaria could be readily produced by cold or by pressure, or by both. Mottlings of the skin, certain peculiar markings of the nails, teleangeiectases, and stigmata were common. Where

there was this defect of central inhibition there was usually a hemorrhagic tendency, as shown by ecchymoses, petechiæ, epistaxis, hemoptysis, hematemesis, hematuria, and retinal hemorrhage. Even in the absence of hematuria, red blood-cells were often found in the urine. Uric acid, urates and oxalates were likewise common. The presence of albumin, tube casts, and cylindroids was less common and was usually intermittent. Glycosuria had also been observed. In many striking cases there had appeared to be a morbid alteration of the thyroid gland, as seen in Graves' disease. The action of the heart was usually rapid, irregular, and easily disturbed, palpitation was common, and in some cases intermittent tachycardia had been noted. Hemic and functional murmurs were occasionally heard. Among other symptoms and morbid associations observed were drug idiosyncrasies, urticaria, local œdema, angina pectoris and pseudo-angina, hyperidrosis, asthma, hay fever, vertigo, migraine and other forms of headache, transient hemiopia and other visual disturbance, persistent mydriasis, astigmatism, myopia, hyperopia, menstrual irregularities, intermittent polyuria, rheumatism, chorea, epilepsy, neurasthenia, gastralgia and membranous enteritis, most of which were doubtless related as effects of a common cause or as secondary results. The development of pulmonary tuberculosis in some cases was probably a sequence of vascular and trophic disturbance in the lung. The author believes that the time would come when the many diseases of obscure origin could be traced to the sympathetic nervous system. Once attention was turned in that direction, the cases were given careful study and a series of microscopical examinations was made, a great step in advance would have been taken in the pathology of these diseases.

Dr. Manuel Carmona y Valle, of the City of Mexico, said that he had had quite an experience in the class of cases designated as a vasomotor ataxia. In one of these the vasomotor symptoms had been exhibited by a unilateral redness, sweating and œdema. He had always supposed the disease to be due to a disturbance of the sympathetic nervous system.

Right Hemiplegia Accompanied by Functional Dysphagia and Dysgraphia.—Dr. Séglas reported to the Medical Society of the Hospitals, Paris (*The Medical*

Week), the case of a young man, aged 20, perfectly free from any neurotic history, who was suddenly seized on awakening in the morning with symptoms of paralysis on the right side, accompanied by loss of the power of speech, but without loss of consciousness. No cause could be found to account for these phenomena. The paralysis was limited to the extremities, being apparent only in connection with certain movements, such as grasping or lifting an object with the hand, standing erect or walking. Sensibility was normal.

The disturbance of speech consisted in motor aphasia without word deafness or blindness, followed at a later date by difficulty of articulation although the movements of the tongue were unaffected. Intelligence was intact. All these manifestations disappeared at the end of three weeks.

Two years subsequently, in July, 1893, the patient had a second attack, coming on in exactly the same manner as the first without loss of consciousness. On this occasion the paralysis remained localized in the right arm, being limited to the acts of grasping and lifting an object with the hand. These manifestations disappeared within a fortnight. At the same time the patient was seized with motor aphasia unattended by any verbal deafness or blindness and followed, as in the first case, by disturbances of articulation and writing, which still persist.

The disturbance alluded to was observed when the patient endeavored to speak as well as when he was asked to repeat a sentence or read aloud.

Spontaneous speech was slow, difficult and jerky in character, certain letters, syllables or even words, being dropped, while others were repeated, badly pronounced or misplaced.

The patient is perfectly conscious of these defects, which are by no means proportionate to the difficulty of pronunciation; they are aggravated by fatigue and excitement while they are improved by attention and exercise. They persist in singing, but they are not associated with any interference with respiration or spasmodic manifestations of any kind. The patient's handwriting presents the same alterations whether he attempts to write on his own accord or under dictation, or to copy, without any modification in the graphic signs.

The mental faculties are unimpaired and all the various

systems are perfectly normal; there is no evidence of paralysis or tremor; no disturbance of sensibility or of the special senses with the exception of the pharyngeal reflex, which is diminished.

In view of these manifestations it is impossible to admit the existence of an organic cerebral lesion in my patient, this diagnosis being contraindicated by the age of the patient, the absence of any cause capable of giving rise to such a lesion, the mode of development of the affection, and the very nature of the symptoms themselves. On the contrary, the symptoms of paralysis observed in this case closely resemble those of astasia-abasia and certain forms of paralysis of a similar kind met with in hysteria. Moreover, the disturbances of speech and writing above alluded to have many points in common, from the point of view both of their clinical characters and progress, with the phenomena which have been described in these affections under the names of mutism and stammering. It must be admitted that apart from a slight diminution of the pharyngeal reflex, none of the ordinary stigmata or manifestations of hysteria are to be found in my patient. Should this circumstance be regarded as invalidating the diagnosis of hysteria, there is such a close analogy between the phenomena present in this case and those of hysteria, that we are justified in attributing them to dynamical or functional causes, a point of great importance in respect of the diagnosis, treatment and prognosis of these phenomena.

Mental Alienation Consecutive to Hernial Operations.—With the exception of Juillard's case I can find no record of the above condition occurring in the practice of others, after hernial operations. It is a well-known sequence, after laparotomy in many cases, particularly in those wherein an opening is made, immediately over the solar-plexus, in the epigastric region.

But it has been my experience to see four well-marked cases of a mild type, after hernial operations. In three the extrusion was omental. These were two men and two women. The phase of mental aberration which followed took the form of a persistent oppressive melancholy.

One was a case of strangulation in a woman, in whom a permanent cure followed operation. The other three

were operated on for radical cure on reducible hernia. In one a permanent cure following, the other two relapsing.

I have no theory to offer as to the elementary pathology of this condition, but it is rational to assume that it may be attributable to mutilation of the sympathetic ganglia, caught up in the extended omentum, or to compression of the nerve filaments of the solar system, within the ligature applied to secure the blood-vessels in the pedicle.

Despondency is a well-known clinical symptom in all abdominal visceral diseases. Now, whether this mental depression, consequent on hernial operations, is directly attributable to reflex irritation, transmitted to the cerebral centers, or not, is a matter of doubt; but, that a phase of melancholia is one of the *sequelæ* of hernial operations, which involves the omentum, seems to me, from my own experience, an indisputable fact.

This consecutive phenomenon should be borne in mind as one of the possible unpleasant sequences of radical measures, which may follow in cases of non-strangulated hernia, when contemplating surgical interference.—*From Manley's "Hernia."*

Temperature in General Paralysis.—It has long been a matter noted by alienists that there are great oscillations of temperature in general paretics. Diurnal oscillations, variations from day to day, asymmetrical axillary temperature and general subnormal or hypernormal temperature have been ascribed to these cases by some authors. Clouston, in Tuke's "Dictionary of Psychological Medicine," states that the general temperature is highest in general paresis, of all insanities. Kiernan (*Jour. Nerv. and Ment. Dis.*, April, 1878, article by A. E. Macdonald, *Am. Jour. Insanity*, April, 1877, and also in a recent article on the diagnosis of different forms of general paresis), claims that a prominent clinical feature of such cases is the temperature; that it is usually subnormal, with extraordinary daily variations (agreeing with Rottenbiller, whom he quotes), and that there is asymmetry of the axillary temperature. Rottenbiller (*Allg. Zeitschr. f Psych.*, 1885) gives similar testimony and cites instances of remarkable daily oscillations, in one case of nearly six degrees. Kroemer (Halle) in the *Allg. Zeitschr. f. Psych.*, xxxvi., 2te and 3te Hefte, in an analysis of observations in thirty-four cases,

claims that the average general bodily temperature in general paresis is lower than normal; that in the last stages there are great variations daily; and that paralytic accidents are accompanied by a rise of temperature.

Peterson and Langden (*Jour. Nerv. and Ment. Dis.*, November, 1893) have studied the subject in twenty-five cases and reached the following conclusions :

1. As regards the average bodily temperature, we find it to correspond to physiological normes. The statements of our predecessors as to hyperpyrexic or subnormal averages cannot be sustained.

2. The diurnal oscillations of temperature in paretics also correspond to physiological normes. The statements to be found in literature as to extraordinary daily variations being frequent in these cases are absolutely erroneous.

3. Asymmetrical axillary differences are so small that they cannot be considered as abnormal, and certainly not of any diagnostic significance.

4. When unusual variations of temperature occur in general paretics, their cause must be sought for in conditions not related to the pathological phenomena of paralytic dementia, but depending upon thermogenic features unrecognized by the physician, or "masked" by the mental state of the patient. Thus, in case two of our series, an increasing hyperpyrexia was noted during the second week's observations, but the pneumonia causing it was "masked" until the fifth or sixth day, the patient dying on the sixth day. Again in case ten, where the highest single daily oscillation was 3.4° and the average daily oscillation for the week 2.2°, the patient suffered from bed-sores which undoubtedly produced some septicæmia. That variations of temperature may take place in connection with the paralytic and convulsive seizures of these cases we do not gainsay, but have made no observations under such circumstances.

Chorea.—In a clinical lecture on "Chorea," Dr. H. C. Wood (*Jour. Amer. Med. Ass'n.*) divided choreic movements in the human subject into two varieties, one of which, common among adults but rare in children, has its origin in the motor areas of the cerebral cortex; the other is rare in adults but common in children, and is the variety known as "St. Vitus' dance." The cause of the choreic movements in the latter form of chorea, he

said, is a paralysis or depression of inhibitory functions of the cells of the spinal cord.

As quinine has the property of exciting the action of the spinal inhibitory cells, and had arrested the choreic movements in a number of dogs on which he experimented, besides having caused marked improvement in the case of a child after four days of its use, he prescribed full doses of quinine for each of the patients under consideration.

Syringomyelia.—Dr. Beevor presented to the London Medical Society (in *The Medical Week*) a young woman with well-defined symptoms of syringomyelia, following on an illness six years ago. She developed numbness of the right shoulder which gradually extended until at present, though there is no loss of tactile sensibility anywhere, there is loss of sensation to pain in the skin of both upper extremities, the neck and most of the face, with loss of temperature sensation over the same area. The reflexes are increased. There is wasting of the thenar and hypothenar eminences of both hands.

NEURO-SURGERY.

Tapping the Lateral Ventricles of the Brain.—Dr. J. Frank, of Chicago, presented a paper so entitled to the section on General Surgery of the Pan-American Medical Congress. After reviewing at some length the literature of the subject and citing cases and the opinions of authors, the writer went on to say that the interesting train of symptoms, long known and recognized—of which the principal were nystagmus, general convulsions, disturbance of the respiration, slowness of the pulse, vomiting, coma, and death—found a solution in the acceptance of the theory of compromise of the brain function by so-called intracranial pressure. Whether this pressure actually existed, or whether the symptoms had for their foundation irritation of brain elements by increased transudation, was of less importance than the possibility of the restoration of the lost brain function in part, or wholly, by removing collections of cerebro-spinal fluid, blood, pus, or other foreign matter. Tapping for hydrocephalus through the fontanelles was so old a procedure that it could not be determined who first devised

or practiced it. Tapping the ventricles by means of trephining was of more recent date, and the method had been technically perfected and shown to be easy of accomplishment. After describing in detail two successful cases recently operated upon by himself the author said that there was a point of election for reaching the ventricles; either of Keen's routes would make attainment of the object easy. They should not, however, be considered the only manner of finding the cavities, nor was it necessary to have recourse to them when the skull had been opened in a different place for injury or disease. From any point on the cerebral cortex it was not very difficult to puncture to the normal ventricle. Familiarity with its location and formation being the principal requirements, it was easy where the cavity had been enlarged, as in chronic hydrocephalus.

After the usual aseptic and antiseptic details of preparing the head, a crucial or curved incision, involving a flap, might be made to expose the cranium. A chisel, drill, or trephine, large or small, might be used. If the opening was too small it might be enlarged with proper instruments. The dura might be simply punctured with a trocar or a dural flap made to expose the cerebral surfaces. This latter had the advantage of allowing closer observation of a cortex and of finger exploration between the cortex and dura. The instrument to be used for the puncture was optional with the operator and the depth of the puncture must depend upon the amount of fluid in the ventricle. Then came the very important question of drainage. Should it be rapid and free, or slow and in drops, and should there be irrigation? These questions would have to be decided to suit each individual case, as the requirements for each must necessarily differ. If the effusion into the ventricle was the result of acute and still active inflammation, the relief of compression by rapid removal of the fluid and continuous drainage until the acute stage subsided, or repeated tapping without drainage, would be a rational procedure. If the inflammation was in the stage of retrogression, the removal of fluid by simply tapping without drainage would be sufficient. In cerebellar tumor, or tumors in other situations, blood-clot from trauma, etc., compromising the circulation to the extent of bringing about a hydrop ventriculi, if the condition was recent, rapid and continuous drainage should be employed. If it was of long duration, with a great

amount of fluid, where the brain tissue was or might be atrophied, tapping and slow, continuous drainage, or repeated tapping, would seem to be indicated. In chronic hydrocephalus with great distention of the ventricle, the brain tissue being atrophied and greatly altered in physical relationship, in order to allow of gradual return to something approaching normal condition, it would be best to both tap and drain slowly. Rapid emptying of the ventricle under these circumstances might be fatal.

In abscess of the brain breaking into the lateral ventricle, the most rapid and free drainage and cleansing irrigations were the only procedures promising relief in that most dangerous condition. In these cases it would be best to trephine and drain both sides and irrigate from side to side. Repeated tappings or aspirations might in some cases take the place of drainage. The means to secure drainage would be found in rubber tubes of different caliber, gauze, wicking, or horsehair. In special cases operative procedure could go further than puncture or drainage. The ventricles might be incised and opened with forceps, so that any consistent mass of foreign body might be removed. When the skull had been opened for compression symptoms, which were confirmed by bulging of the dura and protrusion of the brain, and no tumor or clot or depressed bone being found, it would be indicated to tap the ventricles. In chronic hydrocephalus, with enlargement of the head, with great distention of the ventricles and corresponding atrophy of brain tissue, tapping and drainage would be indicated. The following conclusions were therefore arrived at by the author of the paper:

1. For the distension of the ventricle, for acute, simple, or tubercular meningitis, tapping the ventricles is a therapeutic measure clearly indicated, and, other things being equal, promises recovery.

2. For effusion of blood into the ventricles, from trauma or disease, the operation makes recovery a possibility.

3. For abscess, involving the ventricles, it is imperatively demanded.

4. In effusion into the ventricles from brain tumors it may offer relief to symptoms.

5. For chronic hydrocephalus, with moderate distention of the ventricles, without enlargement of the head, it may afford relief.

6. For chronic hydrocephalus, with great distention of the ventricles and enlargement of the head, the operation will lead to fatal results.

The president of the section asked if, in cases of distention from acute hydrocephalus, the author of the paper had tried laminectomy.

Dr. Frank said he should deem such a measure feasible in a condition of general distention.

Dr. Lavista, of the City of Mexico, expressed high appreciation of the work reported by Dr. Frank. He thought that in such cases simple trephining did not give a sufficiently wide area for work, and that the skull might advantageously be still further removed by craniotomy measures.

NEUROTHERAPY.

Treatment of Locomotor Ataxia with Phosphatic Injections.—This method of treatment has of late been successfully used in Brussels and Geneva in advanced cases of locomotor ataxy. Dr. Forbes Winslow, in a recent communication to the *Lancet*, corroborates the reports of its efficiency and details notes of a bad case cured by injections of phosphate of sodium. The patient was seen by the late Sir Andrew Clark, who regarded the case as incurable. The injections were made in the neighborhood of the spinal column, and when twenty five had been given marked improvement was visible, and after the fiftieth injection the patient was completely cured. Dr. Winslow states emphatically that in a certain class of cases where locomotor ataxia exists, as well as in some forms of mental disorder, absolute cures have taken place, and in cases in which the prognosis appeared grave and unfavorable. Messrs. Burroughs and Wellcome have prepared tabloids. which contain, we understand, ten centigrammes of the phosphate of sodium as the active ingredient.—*N. Y. Med. Jour.*

The Therapeutic Merit of Combined Remedies.—The following excerpt from an article under the above caption, in the *Virginia Medical Monthly*, by Stephen J. Clark, M. D., No. 66 W. Tenth Street, of New York, plainly outlines the useful combination of two leading remedies in materia medica:

"Binz claims specific antiseptic powers for quinia; other writers are in accord with him on this point, and report good results from large doses in septicæmia, pyæmia, puerperal fever, and erysipelas. It is a germ destroyer of the bacilli of influenza (*la grippe*). A full dose of quinine and antikamnia will promptly relieve many cases of this disease. In the gastric catarrh of drunkards this combination is valuable. Quinia is a poison to the minute organism —sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose of antikamnia and quinia will often arrest a commencing pneumonia or pleuritis. This combination is also useful in the typho-malarial fever of the South—particularly for the hyperpyrexia—both quinia and antikamnia, as previously said, being decided fever reducers. The combination of antikamnia with quinia is valuable in the racking headache, with high fever, attendant upon malarial disorders. It is likewise valuable in cases of periodical attacks of headache of non-defined origin; of the so-called 'bilious attacks'; of dengue; in neuralgia of the trigemini; in that of 'ovarian catarrh'; and, in short, in nearly every case where quinine would ordinarily be prescribed."—*New York Medical Journal*, November, 1893.

Trional for Morphinomania.—At the meeting of the Pan-American Congress, September 6th, 1893, Dr. J. B. Mattison, of Brooklyn, N. Y., read a paper on "Morphinism," in which he called attention to the fact that the modern treatment of this disease is compassed mainly by the use of three drugs;—bromide of sodium, codeine and trional. "These," says the author, "form a combination of unrivaled efficacy, if properly used in proper cases; and combined with minor aids, make a method far in advance of any yet presented to secure two leading objects—minimum duration of treatment and maximum freedom from pain."

Neuralgia.—These cachets are claimed to be especially efficacious in recent cases of trifacial neuralgia, sciatica and acute muscular rheumatism:

℞ Phenacetine..... } ää gr. xxxv—℥ij.
Salol ..... }
Caffeine..... ..... gr. iv—vij.

Mix and divide into ten cachets.—From two to four cachets a day.

—Dr. Domanski, in *The Medical Week*.

Bromidia.—The *Chicago Medical Standard* speaks thus complimentary of bromidia: "The results obtained from bromidia have been excellent. It combines all advantages of other hypnotic preparations without their disadvantages. The fact that it produces no unpleasant sensation on awaking renders it specially valuable."

CLINICAL PSYCHIATRY.

Sulphonal *versus* Forcible Feeding in the Insane. —Dr. Brough, Assistant Physician of the Argyle and Bute Asylum, reports (*The Journal of Mental Science*) the use of sulphonal in five cases of insanity which required to be fed forcibly, in each of which its use was followed by voluntary eating on the part of the patient, the sudden change of demeanor being very striking in the persistent and intractable cases referred to.

No markedly evil effects were recorded from the use of sulphonal for long periods.

EDITORIAL.

[*All Unsigned Editorials are written by the Editor.*]

Provision for Professional Advertising in the Code.—Pending the Revision of the Code of Ethics of the American Medical Association, would it not be wise for the Committee on Revision to consider if there are any proper ways consistent with professional dignity and propriety by which a certain kind and degree of medical advertising might be countenanced and advised in order that the public should be properly enlightened and their wants and true welfare subserved? Without suggesting specifically what form or style of advertising should be tolerated or advised as strictly in accord with the consensus of professional opinion as etiquetical, it is evident that something should, if possible, be done in this direction that might tend to circumvent the power and hold of quackery on the public. The people get much of their knowledge, though in improper form, from irregular practitioners. Quackery, because of professional silence on the subject before the public, is filling the land with hypochondriacs, cranks, syphilophobiacs, imaginary lost manhood sufferers, *et id omne genus* and the flaring *ignes fatui* of charlatanry beguile them to ruin. It seems a difficult subject to handle, but something may suggest itself to the Revision Committee.

Besides this evil, there are other subjects on which the public needs light. The chief is that of the special consultant and his qualifications. If a doctor should be allowed and advised by the code to frankly and without indelicacy or unprofessional ostentation, announce where he graduated and the line of his particular experience, it would seem that this could not harm the profession but would rather benefit it, while serving the public interest, and this latter is the real duty of Medicine to the public.

Suppose, for instance, a person wishes to know the best medical adviser as to the different hospitals for the insane and the management of the varying and difficult forms of insanity? While it is the duty of the family physician to know everything, he does not, and he often, because of his ignorance of the forty or fifty private institutions for the insane in the country and twice as many public asylums, and the

special features for special forms of mental aberration of these several institutions, ill advises the friends of the patient, and his doom is sealed. Now, why should not a man who has specially studied this subject, learned all about these institutions and the *personnel* of the several physicians in charge and their special fitness, let the public know in a delicate and proper way, that he wishes to be regarded as an adviser in clinical psychiatry and has properly qualified himself for what he wishes to assume, by the personal acquisition of the proper knowledge on the subject? The same might be said in regard to advice concerning the excessively nervous, the inebriate, the epileptic, paralytic, etc.

The department of Sanitary Science is likewise another subject upon which proper and professional announcements to the public might be made by qualified experts in hygiene having professional confidence and endorsement. Other special forms of fitness might be in a similar manner proclaimed by those who wish to limit their medical advice and practice without "proclaiming their special skill in particular diseases," with typical "awful examples which have resisted every effort at cure of the regular profession," in short, without violating the well-known proprieties recognized by all followers of professional etiquette and true friends of the code.

Let men make known the field and limit of their work, on their signs, cards and in the press, if they choose. Let the ophthalmologist proclaim himself such, the laryngologist and the neurologist likewise. As for the gynecologist, the whole field is his (at least he claims it), so far as woman is concerned.

The absurdity of having the public call on a specialist for services he does not render and being compelled to hunt around from one doctor to another till he finds the one he wants, when it might have been indicated on the sign, is apparent to all businsss men; and the equal absurdity is also plain, of permitting one to say his practice is limited to certain diseases and making it unprofessional to use the term that indicates the limitation on his card. The tendency of this utilitarian age is to philological abridgment, to substitute single words for phrases and short ones for long ones. The judicial council has ruled it unlawful to the code to say ophthalmologist or otologist, but instead, enjoined the substitution of the phrase on professional cards "Practice limited to diseases of the eye or ear."

The profession is now in a transition stage on these subjects. When and how should it emerge without violating the proprieties? is the question.

"Civil Service" in American Hospitals for the Insane.—Dr. S. V. Clevenger, Superintendent, Illinois Eastern Hospital for the Insane, expresses himself as follows:

During the past quarter century we have heard much of civil service rules; adopted, urged, discussed, and about to be enforced, in our general, state and municipal governments; but not until this year of 1893 has the golden advice been followed in earnest. "The best way to begin reforms is to reform." The insincere pretensions of politicians were evidently mere "sops to Cerberus;" the general clamor for more decency and honesty in the administration of public affairs was met by promises, platitudes and subterfuges, until the astonished demagogues awoke to a realization that the people were talking at the polls in a way comparable to European revolutions, that cost vast expenditures of life and treasure.

Hypocrisy has its value in this instance in the pretense finally leading to the actuality. As the educator, "Puck," says: "It may become possible to call a man a politician to his face without having to dodge."

The spoils system in American public policy found its most terribly logical results in insane asylums; and for very simple reasons. The legal maxim that every man is presumed to be honest until proven to be guilty is not only paraphrased, but reversed, by every business man, who, whether he dares to express his thoughts or not, is compelled to treat most men as thieves until they are proven to be honest, and why not? In the evolutionary scale the acquisition of the "secondary ego" of Wundt, is by the few. There are not many who take philosophical views of everything and can conceive of the keen enjoyment experienced by those who subordinate life itself to doing good to others. Not that the multitude are moral imbeciles, but their thinking apparatus has not evolved to an extent that will enable them to know how to do good to others in the most effective way; though they would resent the imputation of selfishness justly as undeserved. They are largely not selfish, but ignorant, and cannot comprehend broader aims and measures, and that is why demagogues in politics and church can manipulate even well-meaning people to their corrupt ends.

So, in proportion to the helplessness of those entrusted to their care, political miscreants have better opportunities for abuse of power. For example; in the management of city affairs a common council can swindle the tax-payers, let us say, 25 per cent. concerning such matters as street cleaning, water supply, court house expenses, etc. Here the "sane" are dealt with.

Next in public hospitals, the sick, who are debarred from energetic

comprehension of why they are not better cared for (although great sums are ostentatiously set apart for them), afford a revenue to those "guardians" of, say, approximately, 50 per cent. of the gross appropriations.

Poorhouses enable greater earnings for the management, but when we come to the average county or city insane asylum, the chances are unlimited. They are simply ideal; nor does the fortunate burglar, saloon-keeper, or gambler boss-politician fail to take advantage of his trust when confided with it by the voters. It may sound preposterous, but at times, in the history of Cook County Asylum management it is not overrating the politician's profits to assert that they netted between seventy-five and ninety per cent. of the alleged expenditures. The people seem to have been blind, deaf, dumb, when exposures were continually made.

The recent "land slide," as the astonishing result of the last general election is called, will pass down to history as an expression of the awakened intelligence of a naturally well-meaning people. Tired of being the sport of party hypocrites, they voiced their protest in more than a whisper, and verified Abraham Lincoln's dictum: "You may fool some of the people all the time, or all of the people some of the time, but you cannot fool all the people all the time." Partisan bigotry is giving place to patriotism, and the awakened public conscience will find nowhere than in asylums and hospitals for the insane a greater culmination of effects from causes, than through the over-turning of the spoils system. Order, quietude, respect for the missionary spirit, that permeates all classes, sectarian to atheistic; swifter recoveries, greater economy to the State, will be among the few millenial proceeds of the recent "land slide," else American citizens are grossly mistaken in their interpretation of the acts (promises are no longer trusted) of the President of the United States and the Governor of Illinois.

English fees have lately been ventilated in the London High Court of Justice. Dr. Keetley, senior surgeon of the West London Hospital, sued Prof. Banister Fletcher for $2,000 for attendance upon the latter's son, who was badly hurt in the terrible railway disaster at Burgos some time ago. Prof. Fletcher paid $500 into court, declaring that to be an adequate payment for the services rendered. Dr. Keetley testified that he thought $150 a day was a fair remuneration for his undivided attention, even for a day's work in London. He received $75 a day whenever he attended court for an insurance company with which he was connected professionally. Dr. Alfred Cooper testified that, in his opinion, the charges were moderate in the extreme. For himself he should charge $2,000 for a trip to Paris, and $150 or $200 a day while he remained there. For going to

Burgos he should charge $5,000. For bringing a patient home from Burgos and taking care of him during a three-days' journey he should charge $2,500. For devoting his whole time to a patient in London he should not consider $40 an hour an excessive charge. Other surgeons gave similar testimony, and finally the jury decided that Mr. Keetley was entitled to $1,750, a verdict that gave him a substantial victory.

Cranks.—In a symposium on cranks in the November 15th issue of the *Medical Fortnightly*, the views of the editor of the ALIENIST AND NEUROLOGIST are thus expressed. We reproduce them in answer to letters as to an opinion on this subject, or rather, these erratic subjects:

Cranks should be corraled and treated as responsible erratics.

Respecting the disposition of cranks, I am of the opinion that the courts and the public should deal with them as with other people, holding them responsible for the proven degree of guilt. A crank may be absolutely or relatively crazy. His insanity may be a morbid, or an exaggerated or morally perverted emotion or impulse, and he may have little or much, or no disease of mind underlying his erratic conduct.

It is for the courts, assisted by true medical expert investigation and testimony, based on experience, to determine this.

To absolve all cranks from responsibility to law for crimes committed by them, is neither wise nor just to them or the community, nor politic in a public sense.

The crank who eats and sleeps well, and performs his bodily functions normally, is *prima facie*, in my judgment, sane enough to be hung for murder on conviction.

The ordinary criterion of insanity, viz., a change of character without adequate external cause, or a life history of insanity, should be the criterion for judging of the responsibility or irresponsibility of these psychical or psychiatrical parasites upon the body social; or the knowledge of right and wrong tests, with evidence as to power of resistance, or absence of power to resist wrong impulses and morbid emotions, should be applied to them as to other people arraigned for violation of law.

Morbid egotism or the vanity of self-importance verging upon madness in varying degrees, is a characteristic of all cranks, but this alone is not irresponsible insanity. To such cases, the psychiatric expert also applies the other data of alienism before reaching a conclusion in questions of responsibility.

I think all cranks should be under surveillance, subject to complaint and examination before courts, and to proofs of the erratic character of their ideas and to judicial warnings; and should be required on complaint of citizens to give bond for proper behavior. Their egotistic

vaporings should not be flattered by the public press, and politicians and men in office should be wary of intimate relationship with them.

Cranks may be developed into madmen by flattering their overweening self-esteem; by false promises unfulfilled, by disappointment, by prolonged vigilance, inadequate nutrition, mental anxiety and by other causes which exhaust and depress and consequently render more unstable, their unsteady and erratic minds.

The average crank possesses the following attributes of the sane mind: He knows right from wrong; he is actuated by motives of self-interest; he ordinarily sleeps well; he eats well ordinarily; he is generally in fair health physically; he is self-willed and self-important. If he threatens to kill, it is usually a conditional threat.

He has the following peculiarities of the insane mind, viz.: An exaggerated self-feeling and intensified egoism. He is self-willed. The difference between the crank and perfectly sane people in this regard is in the practice of self-restraint. The trouble with the crank is largely in his neglected training of self-control.

My remedy for cranks would be to corral them in half-way houses, midway between the penal reformatory and the lunatic asylum. Put them to work for their health and the good of the State, at fair compensation, letting them out on leave of absence and bond, conditioned upon surveillance and good behavior.

Cranks are converted into lunatics through the cultivation of their natural egoism, which tends to become inordinate and over-mastering, under certain exciting causes in times of political, financial or religious commotion. His egotism leads the crank to aspire to a leadership in State, church, financial affairs or in war, and when his fancied merits and services are not recognized in accordance with his appreciation of them, he is hurt in mind and seeks remedy in revenge. Politicians had better play with fire than with the crank who has a mission unrewarded.

American Medical Association.—The Forty-fifth Annual Meeting of the American Medical Association will be held in the City of San Francisco, Cal., on Tuesday, June 5th, 1894.

A Happy New Year!—With hearty good will we wish you, gentle reader, faithful collaborator, wise contributor and honest advertiser, a happy and prosperous New Year! May its moral, intellectual, scientific, literary and pecuniary fruition satisfy the fondest hopes of the present and gratify your highest aspirations. Fourteen years of neurological growth and psychological advance have passed in the history of the ALIENIST AND NEUROLOGIST and in the history of all who aided to lift this journal to the high plane it now occupies in professional and public esteem, as a safe guide and instructor in psychiatry, neuriatry and in the general problems of psychology, which now occupy so prominent and important a place in professional and popular research and thought. We have all advanced through mutual endeavor. The ALIENIST AND NEUROLOGIST joins its hearty thanks with the good wishes of the season, and hopes, by renewed diligence in delving after neurologic truth and continued unswerving fidelity to the interests of its patrons and co-workers, in the year upon which we now so auspiciously enter, to merit still greater confidence and support from its many friends now living in every quarter of the world. To one and all then, thanks and good wishes for a happy, happy New Year!

Dr. Kerlin.—A. M. Miller, M. D., editor of *The Charitable Observer*, published at the Asylum for the Feeble-Minded, Lincoln, Illinois, and a member of the Association which Dr. Kerlin adorned, thus speaks of him:

Dr. Kerlin was born in Burlington, New York, May 27th, 1834, and early showed a strong interest in the work which has claimed his energies for more than thirty-five years and has given him a name of more than national importance in the peculiar department of our work.

A man who combined ideas with executive abilities to so eminent a degree in the early history of our work and who many times has crystallized those ideas with no other assistance than the conviction of right which has always actuated him, and at the same time who has compelled the confidence and respect of all opponents, is necessarily a man of high moral attainments.

Dr. Kerlin has seen the largest institution for the care and education for feeble-minded children in the world, grow from an experimental school of about 25 pupils in Germantown, Pa., to the grand public charity which it now is, where about 900 children of all grades are splendidly cared for, mainly through his influence. His unselfishness of purpose and personal magnetism has enabled him to fill a place in the

hearts of his employes during all these years, enjoyed by few. His counsel, born of experience, will be missed greatly in all gatherings of a public character connected with our work, as he has for years been foremost in pressing the claims of the feeble-minded wherever he felt good might result. We wish to express our deepest sympathies for the institution at Elwyn and assure them that we participate in their loss.

Dermatological Neurology or Neurological Dermatology, has become an interesting field of study, especially under the close observation and keen research of Dr. A. H. Ohmann-Dumesnil, of St. Louis, who keeps a scrutinizing eye on possible neurological revelation in the field of dermatological discoveries, as our readers will discover (if they have not done so), by examining valuable contributions in the direction indicated by this indefatigable student of diseases of the skin. These contributions will show that the recent president of the Neurological Section of the First Pan-American Congress was justly and worthily honored.

Papers on Neurological Dermatology, by A. H. Ohmann-Dumesnil: "Alopecia," Internat. Clinics; "Herpes Zoster," Internat. Clinics; "Cornu Unguale," Internat. Clinics; "Vitiligo"—Case cured; "A Case of Recurrent Pruritus;" "Alopecia Areata and Its Successful Treatment;" "The treatment of Pruritus Ani;" "Recurrent Enfoliative Dermatitis;" "Plica Polonica, Its Pathology," and "An Unusual Case of Atrophy of the Skin."

Dr. Kerlin, Superintendent of the Pennsylvania Training School for Feeble-Minded Children, who died October 22nd, was an accomplished, scholarly and enthusiastic teacher and physician, a pupil of the eminent Dr. Seguin, pioneer in the work of his State, an urbane entleman, a sincere friend and a noble philanthropist.

We counted him among the most genial and conenial of our friends, and tender to his bereaved family our sincere sympathy. His place was well filled for humanity and science, and it will be difficult to better fill it by any mortal.

A Physician in the Cabinet.—Sooner or later the profession must be so recognized. It ought to have been done long ago. It should be done now. What would the American Army of the Revolution have done but for the fertility in expedients and the great skill of Benjamin

Rush, its first Surgeon-General, in providing against the British embargo on medicines, and otherwise for maintaining the health of the ill-clad and ill-fed patriots of the Revolution?

Yet Congress has not given him a fitting monument, and this simply because he was only a doctor and not an important political factor. But the medical press is changing and will effectually change this. Hitherto they have modestly prayed for proper governmental recognition. They are now demanding, and henceforth will demand, their rights of representation in what so essentially pertains to the welfare of the people and the glory of the nation.

Sanitary Science is as important to the nation as Law or Army, Finance and Agriculture. National health promotes national prowess and assures national longevity.

Prize of the American Neurological Association.—The American Neurological Association offers a prize of $200 for the best essay on any subject connected with Neurological Science.

This competition is open to physicians who are legal residents of States in North and South America.

Essays must be sent to the Secretary of the Association on or before the first day of May, 1894.

Each essay shall be accompanied by a sealed envelope containing the name and address of the author, and bearing on the outside a motto, which shall also be inscribed upon the essay.

Essays shall be type-written, in either the English or French languages, and with the pages securely fastened.

The Council of the Association reserves the right to reject any or all essays judged unworthy of the award.

Each essay must exhibit original research, and none will be accepted that has previously been published. Græme M. Hammond, M. D., Secretary, 58 West 45th Street, New York City.

A New Firm.—Mr. Emile Baumgarten has taken a proprietary life-interest with Gertrude Zella, junior member of the matrimonial firm of Mr. & Mrs. John Carnrick, of New York. This new partnership affiliation was formed November 29th, 1893, at All Souls Church, Madison ave. and Sixty-sixth st., New York.

Thus one by one the links in love's golden chain are

forged and affection's silken cords are woven into new loves that bind the hearts of men and women to home and heaven. With our congratulations, we wish the bride and groom and the father and mother of the happy couple a Happy New Year! All connected with this prosperous and square dealing house, from father to son-in-law and all under their command, have our best wishes.

Mathews' Medical Quarterly.—We take pleasure in inserting the following matter of interest to the profession:

LOUISVILLE, KY., Nov. 28, 1893.

To the Editor of the ALIENIST AND NEUROLOGIST, St. Louis.

My Dear Sir: As soon as possible after the first day of January, 1894, Dr. Joseph M. Mathews, Professor of Surgery and Clinical Lecturer on Diseases of the Rectum in the Kentucky School of Medicine, of this city, will edit and have issued a Quarterly journal entitled *Mathews' Medical Quarterly*, devoted to Diseases of the Rectum and Gastro-Intestinal Diseases, Rectal and Gastro-Intestinal Surgery. As you well know, Dr. Mathews has given these subjects special attention for years, and he feels that it is his duty and pleasure to have an organ through which these subjects can be freely discussed and written upon.

There being no journal specially devoted to these diseases in the United States, it is believed that it will be of service to the many physicians who are interested in them.

The journal will be of beautiful design, and will contain from 150 to 200 pages of reading matter.

It will be issued upon the first days of April, July, October and January. .

I will be pleased to have you notice this announcement in your journal and to place us upon your exchange list. I am,

Very sincerely yours,

HENRY E TULEY, M. D,

Assistant Editor and Manager,

Clinical Assistant to the Chairs of Practice and Diseases of Children,

Kentucky School of Medicine.

P. O. Box 434, Louisville, Ky.

The First Alienist and His Adequate Fee.—"It is an ill wind that blows nobody good," and while we regret to learn that our genial friend, the talented and accomplished editor of the *Journal of the American Medical Association*, has been ill with bronchitis, we are pleased to know that during his convalescence he has *brought up* something from the lore of the past that will interest

and encourage psychiatrists of the present to persevere in the good cause of rescuing the insane, and in properly charging for their services. This is what Dr. Hamilton found in Monsieur Portal's "Histoire de L'Anatomie et de la Chirurgie." Paris, 1770:

> Melampus is the first to whom is attributed medical writing. He lived about the year of the world 2705 (1,380 years before Jesus Christ); was born at Argos, of Amithaon and Algaide or Idomena, the daughter of Abas. Melampus was a shepherd, and the two daughters of the king of the country falling insane, he was called and caused them to be purged with hellebore, and frequently bathed in a certain well which cured them.
>
> He asked for and obtained a slice of the kingdom for himself and one for his brother Bias, and they espoused the two daughters.

It is well, betimes, to refer to and act upon the ancient precedents, and Melampus, we may here remark, was neither a chump in the matter of charging, nor a homœopath in his therapeutics, and withal, he betrayed a commendably charitable bias towards his brother.

Mercury in Tabes Dorsalis.—The November ultimo number of *Centralblatt für Klinische Medicine*, contains a review of Dinkler on this subject by Norden, of Munich, seventy-one cases from Erb's recent records under this treatment having been examined, this record showing in fifty-eight cases, improvement; eleven, aggravation, two of the latter having brain substance and arterio meningeal lesions, but the results on the whole are quite a satisfactory confirmation of the mercurial plan of treating posterior spinal sclerosis.

In the fifty-eight improved cases, favorable changes were noted, as follows: Sensory disturbances were improved, as manifested by the entire disappearance of the feeling of constriction or girdling pains, sense of cold, and of the tingling and creeping sensations, etc., or by lessening of their intensity or lengthening of the intervals. The lancinating pains became milder or entirely disappeared.

Zones of hyperæsthesia and of diminished sensibility, became smaller or disappeared entirely. Improvement of sensibility was quite rapid. There was apparently diminution and complete disappearance of the ataxy, which seemed to run a course quite independent of the sensory symptoms.

In regard to the tendon reflexes, temporary or permanent improvement followed. Improvement took place in the optic nerves, and in the functions of the bowels, bladder and sexual organs, atrophy and paralysis being ameliorated.

Finally, it should be emphasized that the mercurial treatment of tabes, as well as in cases of secondary syphilis, seems to lessen the destructive metabolism, and benefits and increases nutrition.

American Medical Publishers' Association.—The first annual meeting of this Association was held in the Grand Hotel, Cincinnati, on Monday, December 4th, 1893, and steps were taken in the direction of active, routine work. The by-laws and rules were revised and amended, while the name was modified in accordance with a demand from medical publishers of a general nature who desired to become members of the Association. The active co-operation of every medical publisher is earnestly solicited. Next meeting in Washington, D. C., September, 1894. Officers: President, Dr. Landon B. Edwards, Richmond, Virginia; Vice-President, Dr. J. C. Culbertson, Cincinnati, Ohio; Treasurer, J. MacDonald, Jr., New York City. For application blanks and copies of the Articles of Association, address, Charles Wood Fassett, Secretary, corner Sixth and Charles sts., St. Joseph, Mo.

The P. A. M. C. Souvenir Boutonier.—We acknowledge the receipt of this beautiful gold souvenir and the accompanying letter:

C. H. Hughes, M. D., St. Louis, Mo.

My Dear Doctor: On the night of September 12th, 1893, a number of friends were on the S. S. Majestic, in New York Harbor, to see me off to a foreign shore. One of them asked for the loan of the button I was wearing, which was furnished by the Pan-American Congress Committee. I was surprised as well as gratified on my return, to find that the company with which my friend is connected had used it as a design for a button which they purposed making me their commissioner in presenting to my associates. To-day brings the fruition of the idea, and I send yours by special delivery in the same mail with this. The button will, I am sure, speak for itself.

Of the work of the first Pan-American Medical Congress I hardly deem it germain to this letter to speak, only so far as to say I believe we will all feel that the button is a symbol of an extraordinary advance in the cardinal idea of our profession—the universality of Medicine.

Our friends, the donors, I am certain, feel this too, and they also

add, with a little bit of skrinking modesty, that while P. A. M. C., in signifying Pan-American Medical Congress represents a notable event, there is still another significance which is pertinent in this day and generation—"Pure Antikamnia Merits Confidence."

The officers of the Antikamnia Chemical Company are reponsible for this last interpretation. In either sense, just wear the button, and oblige, Sincerely yours, A. M. Owen.

Evansville, Dec. 18, 1893.

Should Inebriates be Punished by Death for Crime Committed while Intoxicated?—In a paper read before the Section on Medical Jurisprudence, of the Pan-American Medical Congress, held in Washington, D. C., September 5, 6, 7 and 8, 1893, Dr. Crothers concludes:

1. The medical treatment of insanity has changed in obedience to a more accurate knowledge of the brain and its diseases.

2. The legal treatment of inebriety is unchanged to-day. Although it occupies two-thirds of the time of courts, all teachings of science and a larger knowledge of the inebriate and his malady are ignored.

3. The ruinous error of punishment by fines and imprisonment of inebriety and petty crimes associated with it, which notoriously increases and perpetuates the inebriate and criminal, is a fact demonstrable in every community.

4. Thus public opinion, through mediæval theories and laws, is training and preparing a class of inebriates who first commit petty, then capital crime, with a certainty that can almost be predicted.

5. The death penalty for such crime utterly fails for the same reason. The execution of any number of this class simply opens the door for an army already prepared and trained to take their places.

6. From a scientific study of these cases it is clearly apparent that they are diseased and incapacitated to act sanely. Alcohol has palsied the brain and made them madmen. The very fact of the continuous use of alcohol is evidence of mental impairment and unreasoning act and thought.

7. To hold such men accountable for their acts, and by punishment, expect to deter them from further crime, and by such punishment check others from similar crime, is an error which both scientific teaching and experience point out.

8. The object of the State, through the law, is to protect society and the individual; but if the execution of the law-breaker fails to accomplish this end, the laws are wrong.

9. The unfounded fear that the plea of insanity in crime, and the failure to punish, constitute an encouragement to further crime, is flatly contradicted by statistics.

10. Among the mentally defective, the insane and inebriates, the death penalty is followed by an increase rather than a diminution of crime.

11. The inebriate should never be hung for crime committed while under the influence of alcohol.

12. This method of punishment is never deterrent, but furnishes an attraction for other inebriates who commit similar crimes in the same way, following some law of mental contagion.

13. The inebriate murderer should be confined for the rest of his life, in a military workhouse hospital. He should be under the care of others, as incapacitated to enjoy liberty and incompetent to direct his thoughts or acts.

14. A change of public sentiment and law is demanded and a readjustment of theory and practice called for. The criminal inebriate occupies a very large space among the armies of the defective who threaten society to-day, and his care and treatment must be based on accurate knowledge, and not on theory.

15. Inebriate murderers should never be placed on public trial, where the details of the crime are made prominent, or the farcical questions of sanity are publicly tested. They should be made the subject of private inquiry, and placed quietly in a workhouse hospital, buried away from all knowledge or observation of the world.

16. The contagion of the crime and punishment would be avoided, and the inebriate's services might repair some of the losses to society and the world.

In the above abstract, readers of the ALIENIST AND NEUROLOGIST will observe a strange mixture of scientific truth and error. The writer draws upon the domains of both fact and fancy for his conclusions. Many of the doctor's propositions are too definite, inelastic and unqualified. Any experienced alienist would agree in designating the fallacious propositions mingled truth and error in nearly every paragraph, for there are degrees and varieties of inebriety as there are of other diseases of the nervous system and of crime. Some inebriety is criminal, some crime is dipsomania only. If we would have weight with courts and the public we should assume authoritative expression upon the grave problems of mind with that caution which comes of the closest scrutiny of premise and the severest logic of conclusion, and always beware of emotional bias. While we concur with Dr. C. that inebriates should not be punished for crime resulting from unavoidable and involuntary intoxication we do not endorse the proposition that inebriety always necessarily exculpates from consequence of crime committed while under the influence of alcohol. There is a question in psychiatry here to be solved in each case only by the true data of alienism. Some men are insane when drunk, some are certainly sane enough to be held responsible.

Surgical Dominance of the Profession has degraded the practice of Medicine proper and reduced the compensation for such services.

A surgeon who secures a large fee for an operation can afford to put a low estimate on his visits preparatory to and after treatment and for strictly medical services, because it is from his family practice (unless he be a very distinguished and renowned operator) that he secures his surgical work.

Surgical judgment is worth no more to a patient in grave cases of disease than medical. The skilled diagnosis and after-treatment of surgical disease is far above the mere operation and its technique in importance, and so is medical skill. It is the true medical skill that saves the surgeon's patients after the knife has done its remedial work. A diagnosis and prescription based thereon that saves a life is as valuable to a patient as an opinion and a cut with the same result. It is the doctor, whether he wields the knife or prescribes medicines only, that does the real saving work, yet it is common for the surgeon in general practice to put a low estimate—too low for the good of the profession at large, on his medical visits, making up the deficiency by the charge for the operation, thus lessening the value of ordinary medical service in the popular mind.

Great operators are not always great physicians. The day of surgical dominance in the profession is passing, and should long ago have passed. The really best man at the bedside in all strictly medical cases is and ought to be the physician, and fee bills that allow only from two to five dollars per visit for medical services while allowing from five to five thousand dollars for an operation, should be abolished. A great surgical operation and its proper after-treatment ought oftentimes to be worth more than five thousand dollars, and there are circumstances under which a strictly medical diagnosis should be estimated as highly as any operation. Few medical visits should bring the physician less than five dollars—the average more—most of them twice this sum; and they would (and that from a willing public too), if the surgical practitioners, with operative prestige, would estimate their strictly medical visits higher than they do. Surgeons in the popular mind were once supposed to possess superior medical skill. If they served for two and three dollars per visit every other sort of practitioner should, or for less, but this

fallacy is passing away and the surgeon who practices general medicine and charges low fees is not so much appreciated by the better element of medical practitioners as formerly. He has filled his place and is vanishing or has vanished.

Lombroso's Lack of Gallantry.—One of the best known brain and nerve experts of Italy, Cesare Lombroso, has recently, in a French periodical, attempted to answer the question whether woman may display genius, or only talent. In his opinion, woman establishes the differential limit between "talent and genius." She may manifest great talents, but never genius, except in extremely rare instances.

Is this deprivation due to the influence of her social condition? Is it owing, as is sometimes affirmed, to the state of ignorance to which woman is confined and to other factitious and undeserved impediments in her pathway? Lombroso does not believe that these are the efficient causes of her intellectual inferiority. He maintains that her alleged ignorance is exaggerated, and that it was never so great as is asserted. For example, the wives of the French aristocracy of the eighteenth century were highly educated and were frequently assiduous followers of the courses of Lavoisier, Cuvier and other *savants* of their period. From this group, writes Lombroso, no female genius ever developed.

We quote his words:

> There are probably as many thousands of women as there are hundreds of men who play the piano. Nevertheless we see no woman achieve fame as a great instrumental genius, although there is absolutely nothing, either in her sexual or her social relations, to explain the phenomenon. In North America, the female painters greatly outnumber the men engaged in the same branch of art, and the female physicians in the United States aggregate at present 3,000. Statistics establish that there were in France, in 1889, as many female as male teachers, viz., 100,000, including both sexes. Now, apart from the rarest exceptions, such as Kowalewski, Rosa Bonheur and Cattani, where are the women, among all this flood of mediocrities, who have enriched the field of medicine, of painting, or of public instruction, with new conquests or even with valuable observations?

Not only, writes Lombroso, is genius almost never encountered among women, but when it exceptionally exists, it is less intense than the genius of man. Let Mary Somerville be cited in the domain of physical science; George Elliot, George Sand and Madame de

Staël in literature; and Rosa Bonheur and Lebrun in art. These are not summits of genius, like Newton, Shakespeare and Michael Angelo.

Lombroso, however, freely admits that women have at times exhibited marked skill, talent and adroitness at the head of governments. These were Pulcheria, Marie de Médicis, Maria Theresa and Catherine II.

Goncourt has said: "There are no women of genius; when they are geniuses they are men." Lombroso finds this observation to be infinitely just, and avers that women of eminent cleverness have uniformly combined masculine anomalies therewith, either of physiognomy and physical constitution, or of gesture and carriage.

George Elliot had the visage of a man. Barine, in his "*Portraits de Femmes*," testifies to her enormous head, her disordered hair, her huge nose, her thick lips, her voluminous jaws, her more than incipient moustache and her elongated visage of a horse. The immense affection which she testified for Lewes, her first husband, did not deter her, a few months after his death, from marrying again, at sixty years of age. This time her choice was a very young man.

George Sand had the voice, and Madame de Staël the face of a man. Most of the female celebrities of modern times have been distinguished by their virile traits. Many of them have a male mandible, notably the two tragedians, Sarah Bernhardt and Duse. It should be added that most of the class cultivate a masculine handwriting.

In terminating his severe study, Doctor Lombroso concedes to woman a certain number of attenuating, even consoling circumstances. He recognizes that, by reason of her wonderful instinctive endowment of tact and *finesse*, she may succeed in politics and statecraft. She may also become the best of instructors and professors. It is true this is not genius; but in the exercise of pure talent, she may rival and even surpass man. She excels in many of the artistic industries, and in the dramatic art. Wherever her field of endeavor has consisted, not in creating great ideas, but in appropriating, assimilating and perfecting those of others, the achievements of woman have been wholly admirable.

WARREN WEBSTER.

Miss Dorothea Klumpke.—The Institute of France, which was founded in 1635, by the Cardinal Richelieu, and reorganized in 1816, consists of five academies, one of which is the Academy of Sciences. The latter is

composed of sixty members, elected for life, after personal application and the submission of their nomination to the head of the State. A chair in this section of the Institute is the greatest ambition of most scientific Frenchmen. They believe this academy to be the highest authority in the world, on everything appertaining to the domain of science.

The French Academy of Sciences confers the degree of doctor in mathematics upon any candidate from any part of the globe who shall write and successfully defend by oral argument before the members of the academy, an appropriate thesis in the higher mathematics. The coveted honor is determined by ballot.

Upon Miss Dorothea Klumpke, of San Francisco, Cal., has just been bestowed the marked distinction, not only of being the first candidate of her sex to whom the grade of doctor in mathematics was ever awarded by the French Academy of Sciences, but of having received the honor without a dissenting vote, all the ballots being white.

Miss Klumpke, who for several years has been attached to the Observatory of Paris, and occupied with very important mathematical studies thereat, selected for her thesis an extremely difficult problem in the higher mathematics, relating to the rings of Saturn, a problem that had already engaged the attention of Maupertuis, Laplace and Sophie Kowalewski.

That the opinion of those authorities who deny to women the genius for abstract scientific speculation is not shared by the eminent French geometrician Darboux, the dean of the Academy of Sciences, is sufficiently put in evidence by the following extract from his address to Miss Klumpke, which we here translate for our readers:

> The great names of Galileo, Huyghens, Cassini and Laplace, not to mention those of my illustrious colleagues, are identified with every important step of progress heretofore made in the attractive but difficult theory of the rings of Saturn. Your own contribution thereto is not to be lightly estimated, and places you in the front rank of those of your sex who have successfully devoted themselves to the study of mathematics. In the last century, Marie Agnesi gave to us a treatise on Calculus. Later, Sophie Germain, who was as remarkable for her literary and philosophic gifts as for her mathematical talent, won the esteem of the great geometricians who adorned the beginning of the present century. Only a few years ago, this academy conferred one of its choicest prizes upon Sophie Kowalewski, which will forever keep her name in juxtaposition with those of Euler and Lagrange, in the

history of discoveries relating to the movements of solid bodies around a fixed point.

Yours is the first thesis presented by a woman for the grade of doctor of the mathematical sciences that was ever successfully sustained before our faculty. You have deservingly broken the record, and won the honor without a dissenting vote.

W. W.

The Antialienist, although a contemporary publication that delves in the same field of psychiatry with us, is not on our exchange list, and although published in so enlightened a center of psychological thought as Paris, was not even known to us until our attention was called to it by the editor of the *Journal des Débats* of that city.

He describes it as a little sheet edited and published, with punctilious regularity, by a few enterprising patients of the *Bicêtre* hospital for the insane. As its name sufficiently implies, it is strictly a combatant organ, occupying its columns with neither politics, religion nor advertisements, but pursuing actively and solely its self-appointed mission of exposing and reforming the shams and abuses of alienists and directors of institutions for the insane. Existing under the same roof, and therefore identified with the good name and prosperity of the time-honored *Bicêtre*, the *Antialienist* is not a clandestine publication, and enjoys a goodly circulation.

Doctor Pinon, the director of *Bicêtre*, when interviewed by the *Journal des Débats* representative, said:

Oh, yes. We not only permit its publication, but encourage it. I am generally the first person to buy a copy on the publication day. Its makers and most of its readers are classed as insane, but they are not repressed or interfered with by the administration. Our rod of discipline is reserved for employes, and is not applied to patients. To the latter is permitted the widest latitude of speech and action, consistent with their health and recovery. The little *brochure* procures distraction for both its makers and its readers, and is a helpful derivative for the relief of their melancholia or delusions.

The reporter ascertained that Charles Etlinger, whose name is printed conspicuously as editor-in-chief of the *Antialienist*, has been an inmate of *Bicêtre* for the last two years. He is a retired sergeant-major of the French army, and when in civil life was a pharmacist. The diagnosis of his case, as entered on the hospital records, is "moral insanity."

The forte of our *confrère* (for so Etlinger is styled by the *Journal des Débats*) appears to be in squibs like the following, with which the sheet is bountifully sprinkled:

Now that the prevailing Lombroso craze has infected the alienists of this institution, it is the design of the director immediately to adopt a macaroni diet for the patients, to require the alienist staff to address one another as "signor" and "eccellenza," to plant an orange grove in the hospital grounds, and to post a gang of brigands in the most shaded part of the *Avenue Bicetre.*

But the *Antialienist* is not destitute of heavy ammunition. Its leading article—its *pièce de résistance*, so to say—in the number here noticed, describes a burlesque invention, attributed to Dr. Bourneville, one of the *Bicêtre* alienists, against whom many of the shorter gibes in the sheet are leveled, and who appears to be the *bête noir* on the hospital staff. This article is signed *Charles Etlinger*, and we here translate it for our readers:

A Fin-de-siecle Alienist.

Yesterday I had a call from a very funny fellow. He is an alienist. Do you like alienists? As for me, I enjoy ever so much having them about, even when they are of no possible use to anybody, as is generally the case. I like their gay delusions, their gleamy eyes and their demoralized apparel.

So far as delusions and eyes went, my visitor was in correct alienist form; but in grotesque negligence of dress he outdid everything of the kind I had before seen.

I had hardly time to observe that one of the buttons of his coat had strayed into a buttonhole of the vest, and *vice versa*, when he opened like a blizzard, as follows:

"Good morning! How are you?" "No worse than usual."

"Do you recognize me?" "I cannot say I do."

"Oh, I must explain. I shave now; in fact, you never saw me before."

Without reminding my caller that the last reason would have sufficed, I inquired the object of his visit.

"I am Dr. Bourneville, alienist on the staff of this hospital," he replied with satisfaction.

"I suspected as much."

"I come to see you because I know that you are a man of intelligence and education, and therefore that you will be likely to stickle at nothing and to spare no sacrifice, in order to help a good idea."

I bowed modestly.

Dr. B. brusquely inquired:

"Which would you sooner do, rot or burn? ¡Come, answer!" "I

must say that the idea of putrefying is not seductive; nor, as to burning, do I just now specially enthuse."

"Not now, of course; but when you die," my alienist continued:

"I have invented a process that knocks inhumation and cremation out of sight. For all those antiquated things I substitute gasification. Do you understand—*gasification!* Not a bad idea, is it? Don't reply till you have heard me through."

"But I assure you, sir," ..... "Hold on. You are dead, are you not?"

"Hear me," ..... "It is only a supposition. You are dead and they bring me your body. I put it into my oven"....

"But that is cremation." "Imbecile! I put you into *my* oven, my particular oven, the oven of my invention, and I dry you. Understand, I dry you. I do not cook you, nor roast you, nor burn you. I *desiccate* you. That is the word. I deprive you by evaporation of all the water you contain. Do you know what proportion of water there is in the human body?"

"I must confess," ..... "Well, there is about 80 per cent.—four-fifths."

"So much as that?" "Yes, as much as that. For instance, Dr. Charpentier, of this hospital, whom you think such a devil of a fellow," .....

"But I never said ....."

"Don't interrupt me. Dr. C., whom you worship, weighs 72 kilos. He represents about 58 kilos of water. So, when you shout 72 times: 'Hurrah for Dr. C.,' you hurrah 58 times for mere water. Such is human grandeur! And the director, Pinon. Do you know Pinon?" "I know him, and I don't know him. Of an afternoon he sometimes walks past my door, but that is hardly knowing him."

"Well, it is frightful how much water Pinon contains. I don't dare to say how much, for you won't believe me. Then, there are corpses that submit to very little waste. Dr. Schleiermacher, for example. How much do you think he weighs?" "On my word, I never weighed him; but he is small, and I fancy he will tip 55 kilos."

"Well, let me tell you, Schleiermacher is the equivalent of just forty-four quarts of water." "Stop, you sicken me!"

"Forty-four quarts of water—you understand? eighty-eight beer mugs of the stuff."

The alienist pronounced "eighty-eight beer mugs" with an air of sovereign contempt.

Then he resumed, without pausing:

"You distract me by your remarks. Let us return to my invention. When your body is wholly dry, perfectly desiccated, I dip it into a mixture of my invention, containing excess of nitric acid, which transforms it into an explosive substance analagous to gun-cotton. I then touch you of—piff, paff—a brisk flash, a great white smoke, and all is over! What do you think of my idea?" "*Fin de siecle!*"

"But I haven't told you half. Instead of metamorphosing you into a simple explosive, I turn you into all kinds of fire-works; roman candles, grenades, suns, etc. In poor families, I charge but a total of 30 francs, to convert the dear defunct into roman candles of all colors. For 10,000 francs, I produce from a single corpse the swellest fire-works conceivable, with allegoric arches." "Superb!"

"But, more than that: good patriots can, by my process, donate their mortal remains to an artillery company. Cannons and *mitrailleuses* may be charged with them. What joy, years after death, thus to deal destruction to the enemies of our country! Does not that tempt you?" "Yes," I replied. "The *idea* is fascinating; but I prefer to wait awhile."

The alienist called me an imbecile, seized his hat, and furiously turned on his heel.

W. W.

Solar Electrotherapy.—

In a dark room with alternating currents of 800,000 voltage, Nicola Tesla, by means of atmospheric vibrations, caused a faint glow of light to appear. Explaining the phenomena, he said: "If I can increase the atmospheric vibrations, say 1,000,000 to 10,000,000, I can produce sunlight in this room. Of course, I can increase the vibrations by increasing the voltage. I can make the voltage 8,000,000 as easily as 800,000, but I am not ready to handle 8,000,000 volts of electricity. Currents of such strength would kill everybody in the room. I expect, however, to learn how to control large voltage. When I have increased the atmospheric vibrations perhaps a thousands times the phenomena will no longer be electricity. It will be light. I am satisfied that sunlight can be made from electricity without doing harm to anybody, and I expect to discover how it is done."

This experiment and others which we have seen Tesla perform give us an electrical explanation of the value of the sun's rays in neurotherapy. We now have the explanation of the value of the solariums attached to our sanitariums, and of the influence of the sunlight in general on animal and plant life and health. We are reaching a point in the science of electricity and light when it is apparent that other purposes will be assigned to the sun than merely to illumine the earth and to the moon, than merely send forth the sun's paler reflected rays for a light by night. The sun is the great dynamo of our earth which the Master Physician of the Universe employs to promote and maintain the sanitation of the earth's population, animal and vegetable. So it now appears, as Tesla has electrified the scientific world with his electrical glow light, so the sun electrifies us.

If light may be correlated into nervous force and nervous force into light, as Brown-Séquard conjectures, we are certainly on the verge of a great therapeutic discovery through the discoveries of Tesla and his followers.

The volitional phosphorescence of certain animals and the light emitted sometimes from certain sick people are among Brown-Séquard proofs, and among Tesla's experiments he emitted from his person a halo like that which is said to have emanated from certain saints of old, only Tesla's halo was in the dark.

HOSPITAL NOTES.

KANSAS STATE INSANE ASYLUM.—Dr. B. D. Eastman, of the Topeka, Kansas, Insane Asylum, has prepared a series of photographic views of his institution, seven of which have been examined by us with much interest. No. 1 shows the Topeka Asylum as it was when first occupied in 1879.

He then had room for 125 patients, and the office and officers' departments were temporarily located in that part of the three-story building nearest the foreground. His living rooms are still there, *temporarily*. The top of the smoke stack of temporary boiler-house, is seen between the buildings, over the connecting corridor.

The negative from which this is printed is enlarged from an old stereoscopic view. These buildings front to the east.

No. 2. Shows the same buildings and their surroundings as they are now.

No. 3. Main building.

The two original ward buildings are to the right, while to the middle and left are seen in succession and fronting south, a ward building (men's department), the central hall building and two buildings for women. Of the domestic and mechanical departments, situated in the rear, only the top of the chimney is visible. The plan for the completion of the main group, contemplates another ward building and the administration building, to be directly in front of the hall building, the business entrance being at the corridor connecting these two. This main group is built of native limestone of soft warm buff and yellow brown tints, in rock-faced, broken ashler, giving a very pleasing effect.

No. 4. Detached building.

This building of brick, situated about 500 ft. east of No. 1, provides for 265 chronic cases, comprising both sexes. It has two dining-rooms in the rear portion of center, on the first and second stories, one for men and one for women. This building has its own kitchen and heating apparatus.

No. 5. Asylum Hall.

The hall, occupying the second and third stories of

the Hall Building, except the depth of one room in front, is 47x73 ft. exclusive of stage, with gallery across the opposite end, has a seating capacity of 600. The stage, 19x47 ft. behind the drop curtain, has regular theatrical arrangements of scenery, grooves, lights, etc., dressing-rooms under, and convenient "stage entrances" thereto.

For Sabbath services the desk is usually placed in front of the drop curtain, and sometimes a parlor scene is set, and curtain raised.

Patients' entrances are under the gallery, from connecting corridors, right and left.

No. 6. Lawn Brigade.

Dr. Eastman is a firm believer in the beneficial effect of occupation for both acute and chronic cases. For the class of men patients he has, the garden and lawn afford a most desirable form of occupation and exercise, and the operations of his Lawn Brigade add materially to the appearance of the grounds.

No. 7. Kitchen Helpers.

For the women, the sewing room, laundry and kitchen afford desirable occupation. This view shows the north porch of the main kitchen, the special occupation being, preparing tomatoes for canning.

We are glad to know that Dr. Eastman and his staff have become so proficient in photography, for when the inevitable political change comes to them, they will have an occupation to fall back upon, besides that of treating the insane.

The Recent Holocaust of the New Hampshire Insane Hospital leads the New York *Times* to the following comments, equally applicable to Illinois:

"The system of caring for the county insane is the same in all counties, differing only in minor details. It was not originated through carefully matured plans after due consideration of the requirements of the insane, but it was the outgrowth of a forced necessity, the guiding principal of which has been to house, clothe, and feed this unfortunate class at the smallest possible expense to the county. To this end few provisions have been made for anything beyond the brute necessities of life. The principle that the insane should always be regarded as sick persons who require expert medical treatment and special care with reference to surrounding influences has not been taken into consideration in caring for the insane

poor. The system under which the county insane are now cared for is lamentably defective, inasmuch as the only authority legally qualified to make these institutions what they ought to be has little or no knowledge of the requirements necessary to the most modern and humane methods of providing for this class. The county system should be abolished. The State should assume the entire support and management of the insane; that all buildings hereafter constructed to be occupied as almshouses, asylums or jails should be made of brick, iron, or stone, with partitions of fire-proof or slow-burning material, and that such institutions should be inspected from time to time by the State Board of Health, which should have mandatory power with respect to all matters relating to drainage, ventilation and protection against fire."

We transcribe with our emphatic indorsement the above extract from the *Medical Standard.*

REVIEWS, BOOK NOTICES, ETC.

THE BLOT UPON THE BRAIN; STUDIES IN HISTORY AND PSYCHOLOGY. By William W. Ireland, M. D., Edin.; formerly of H. M. Indian Army; Corresponding Member of the Psychiatric Society of St. Petersburg and of the New York Medico-Legal Society; Member of the Medico-Psychological Association. Bell & Bradfute, 12 Bank Street, Edinburgh. Simpkin, Marshall, Hamilton and Kent & Co., Limited, London.

> "'Tis the blot upon the brain
> That will show itself without."
> —*Tennyson.*

In this (second edition) entrancing volume of psychological and psychiatrical truth, the distinguished author has most happily blended scientific facts, historical truth and literary beauty of style and diction, so that while the book reads like a classic novel, it demonstrates that truth is stranger, and may even be more entertaining, than fiction.

In this book, the study of diseased function of the brain has helped the author to give explanations of some important events in history. In a similar way several questions in psychology are approached through knowledge gained by observations in mental derangement.

In this new edition the author has kept the work abreast of scientific research, and made a good many changes and additions without increasing the size of the book save by a few pages

No student of anthropological science can afford to ignore the reading of this remarkable and singularly entertaining volume.

The nature of the author's researches may be gleaned from the following subjects treated of in this volume, viz.: "The Reign of Philosophy," "Hallucinations, Especially of Sight and Hearing," "The Hallucinations of Mohammed and Luther," "On the Character and Hallucinations of Joan of Arc" "The Insanity of Power," "The Limitations of our Life," "The Debasing Effects of Unchecked Power," "The Claudian-Julian Family; Augustus Drusus, Julia, Tiberius, Caligula, Claudius, Messalina, Agrippina, Nero, Marcus Aurelius, Commodus, Heliogabalus, Mohammed Toghlak, Sultan of India, Ivan the Terrible," "The End of the Dynasty of Rurik—The Romanofs—Paul of Russia," "The History of the Hereditary Neurosis of the Royal Family of Spain," "St. Francis Xavier, the Apostle of the Indies," "Fixed Ideas, Folie à Deux—A Mad Family," "Unconscious Cerebration," "Thoughts Without Words and the Relation of Words to Thought," "Wordless Thought," "The Relation of Words to Thought," "Left-Handedness and Right-Headedness," "Mirror Writing" and "The Dual Functions of the Double Brain."

Materia Medica, Pharmacy, Pharmacology and Therapeutics. By W. Hale White, M. D., F. R. C. P., Physician to, and Lecturer on Materia Medica and Therapeutics, at Guy's Hospital, London, etc., etc.; Edited by Reynold W. Wilcox, M. A., M. D., LL.D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital, etc., etc. P. Blakiston, Son & Co., 1012 Walnut Street, Philadelphia.

This book is one of the best of its kind for ready reference. It is condensed, compact and completely practicable.

The author, W. Hale White, is a well-known lecturer on Materia Medica and Therapeutics at Guy's Hospital, and has written besides an elaborate text-book on general therapeutics, of which the work before us is a condensation.

The author shows a broader knowledge of the physiology of the nervous system and a more thorough aptitude for a sound basis for the explanation of the physiological action of remedies than is shown by many writers who have written on the subjects of which he treats.

The book is up to date in its table of contents, and, we think, will neither disappoint the student or general practitioner as a book for study or as a work of reference.

Medical Journal Advertising —A Manual for Advertisers, edited by A. L. Hummel, M. D. Published by Hummel & Parmele, Medical Journal Advertising Agents, 612 Drexel Building, Philadelphia. Price one dollar.

This is a priceless little book to Medical advertisers. Dr. Hummel is in sympathetic touch with the medical profession, and we may say his little book is in some respects positively touching. It touches the highest interests of the medical advertising fraternity, whose name just now is legion. Some of the legends in this charming *brochure* are likewise touching, for instance, the "Advertising Agent as a Protecting Angel," written by one of the Saints of the Ale and Beef Company, and inspired by that invigorating beverage. "Cal" Reed's beautiful tribute to the "busy doctor who reads medical journals, the Papoid people's puff, the Antikamnia Chemical Company's proofs that medical journals inform and merit sustains," are alike good reading.

But we cannot name all the bright advertising articles in this *par excellence* medical advertisers' book. We can only say in conclusion, that the book, like its *distinguished* author, must be seen to be appreciated. If you do not want to advertise do not send for this book, for so sure as you do, you will be as if Hummel had your hand in his grip—you will be done for.

The City of St. Louis and Its Resources. Published by the *Star-Sayings* of St. Louis, Mo.

In its illustrative features, this is a work of high art, and its literary merits and historical accuracy are beyond invidious criticism. Accurate in its facts; replete in its illustrations; clear in its text and smooth in its diction, it ought to be read with interest and appreciation by every

well-wisher of St. Louis. It will certainly prove still further promotive of her rapidly growing prosperity. It is a picture gallery and a history of St Louis combined. It has omitted mention, however, of some of the leading St Louis medical periodicals.

THE MONISM OF MAN; or The Unity of the Divine and Human. By David Allyn Gorton, M. D., formerly editor of the *National Quarterly Review*, author of "The Principles of Mental Hygiene," "The Drift of Medical Philosophy," etc. G. P. Putnam's Sons, 27 West Twenty-third Street, New York; 24 Bedford Street, Strand, London. The Knickerbocker Press. 1893.

The book that shall explore the realms of the ultimately knowable to the finite mind has yet to be written and the wisdom to search and further discern it will not perish with our generation. The author has succeeded in presenting, in these essays, a thoroughly enjoyable book to those who love to dwell upon problems of mind and matter correlated. His knowledge of the somatic basis of mind and of the physiology of the brain are such as to qualify him to write on the subject he has chosen, which is more than may be truthfully said of some of the present writers of the day on similar themes. The book is a fit *sequel* to the writings of Maudsley, and will prove alike entertaining to those of our readers who may admire the latter author.

The volume herewith given to the public comprises a series of essays that was contributed by the author to *The National Quarterly Review* during the period of his editorial charge of that work. The essays have been rewritten and the subject enlarged upon so as to form a consistent whole. In the discussion of the subject, the author, while mindful of the verities, or established truths, has been hampered neither by the creeds of Christendom nor the dicta of science. He "cannot pretend to have fathomed the depths of the subject, since it is unfathomable." While he thus recognizes the limitations of finite faculties and the vastness of the sphere of unexplored knowledge, he has endeavored to be in all things rational.

We think the author has been as successful as the limits of the knowable to science in its present state of evolution will permit.

HERNIA; its Palliative and Radical Treatment in Adults, Children and Infants. By Thomas H. Manley, A. M., M. D., Visiting Surgeon to Harlem Hospital, etc. The Medical Press Co., Limited, 1725 Arch Street, Philadelphia, Pa., 1893.

This is a compact, well written and practical little book, describing, with suitable illustrations, the various forms of abdominal, ventro-inguinal, scrotal and pudendal hernia, etc., with the operative technique for relief or radical cure of the non-strangulated as well as the strangulated forms, with a table of the author's cases and results, and a somewhat full bibliography of the subject.

A chapter which we transcribe from pages 214 and 215 and place under the head of Clinical Neurology will prove of special interest to our readers, while all who do their own operative surgery, or who may have

occasion to advise or prescribe on the subject of hernia, may read the book with profit. *Vide* Clinical Neurology.

La Pratique des Maladies du Systeme Nerveux, dans les Hospitaux de Paris, Aide-mémoire et formulaire, de Thérapeutique Appliquée. Par Le Professeur Paul Lefert, Librairie J. B. Bailliere et Fils, Rue Hautefeuille, 19, pres du boulevard Saint-Germain. Paris, France.

The medical profession is indebted to Professor Lefert for a little book, in which he sets forth clearly and succinctly the treatment of nervous diseases in the hospitals at Paris by such men as: Messrs. Babinski, Gilbert Ballet, Bourneville, Brown-Séquard, Charcot, Christian, Debove, Déjerine, Dujardin-Beaumetz, Jules Falret, Feré, Gilles de la Tourette, Joffroy, Luys, Magnan, Pierre Marie, Constantin Paul, Raymond, Seglas, Sollier, Auguste Voisin, Jules Voisin, etc.

In this work are treated the questions which should occupy the attention of all physicians and surgeons: Abasie, ataxie locomotrice, casque vibrant, chorea, contractures, delirium, dipsomania, eclampsy, epilepsia, fauteuil trepidant, goitre exophotalmique, hemiplegy, hypnotism, hysteria, hystero-traumatism, injections of testicle fluid, insomnia, migraine-ophthalmique, myelitis, neurasthenia, pachymeningitis, paralysis agitans, polynévrite, sclerosis, suggestion, syphilis of the nervous system, syringomyélie, tabes, tétanie, tics, nervous transfusion, vertigo, etc.

This book is from a collaboration of eighty-five physicians and surgeons, in the hospitals, and contains more than 400 consultations on the most varied and novel cases.

It permits the medical instructor to constantly review that which he has already passed through, when in service in the hospitals, as well as keeping the retired physician *en rapport* with all the newest methods of treatment.

The practitioner can always rely on any consultation described therein, the name of his *confrere*—giving authority and weight to the subject.

For facilitating the researches, this book is supplied with two alphabetical tables, one of the names of all authors, the other a list of subjects. In this manner the reader is able to have the opinion of this or that professor, on the many questions of the day, and at the same time pass in review the opinion of some of the heads of the service in a particular case.

New Truths in Ophthalmology. By G. C. Savage, M. D.—Savage has had his more important contributions to ophthalmic literature published in a neat cloth volume of 152 pages with the above title. The greater portion of the book is taken up with the subject of muscular errors, their detection and correction. A brief chapter is given in explanation of the "law of projection," and a short one on "The Monoscopter" or as commonly known, the horopter. There is a

chapter on the use of mydriatics in determining refraction, and a few pages given to a description of certain original operations on the eye.

The first chapter in the book treats of the "Harmonious Symmetric Action of the Oblique Muscles in all Cases of Oblique Astigmatism." This is a subject that has engaged Savage's attention for four or five years, and he has formulated certain theories as to the action of the obliques that, whether altogether correct or not, are at least based upon sound physiological reason.

In astigmatism in oblique meridians of the cornea he shows by a law of refraction of curved surfaces that there would, by the unsymmetrical positions of the retinal images, be diplopia did not one or both eyes rotate so as to bring the images to corresponding parts of the retinæ.

This is effected by the oblique muscles. He claims that in all cases of oblique astigmatism, where the meridians are not inclined the same way, diplopia is obviated by the rotation of the eyes on their antero-posterior axes by the oblique muscles and that in fitting glasses the error is liable to be made of placing the axes in these erroneous positions, and thus forcing the obliques to keep up their strained positions. Hence, discomfort. He gives certain rules for determining the correct position for the cylinders.

It would be somewhat difficult, doubtless, to find many persons who have had this same experience in determining the axis of a cylinder in whatever meridian, except in the very lowest degrees of astigmatism, where the lens may move through several degrees before any perceptible effect is observed. The experience with most observers is, the axis which gives the sharpest vision is the one in which to set the cylinder, and the exceptions are few that it fails to give comfort. In other words, no attention is paid to the oblique muscles. The distress caused by wearing correcting cylinders with oblique axes, about which some patients complain so much for some weeks, Savage ascribes to the continued tendency from habit of the oblique muscles to rotate the eyes as they had been doing. Is it not due to the confusion of vision in looking obliquely through the cylinders, causing objects to tilt or slant out of right lines? At least this is in accordance with the complaint given by the patients, and it is in walking and looking around that they notice the confusion most, and not when looking through the optical centers of the lenses. The senses become accustomed to this phenomenon in the course of time, and it is no longer taken cognizance of.

The next chapter deals with "Insufficiencies of the Oblique Muscles and How to Correct Them." Savage determines the presence of insufficiency of the obliques by looking at a straight horizontal line with the double Maddox prism over one eye, producing two parallel lines, while with the other eye the line is seen to lie midway between the two and parallel, if there is no insufficiency of the obliques, but dipping up or down at the temporal end respectively for the superior or inferior oblique in case of insufficiency. Correction consists in orthoptic

exercises by cylinders of two or more dioptrics set at an oblique axis so as to increase for the time the work of the deficient muscle.

Chapter three deals with "The Relationship Between the Centers of Accommodation and Convergence." There is little expressed in this chapter at variance with the commonly accepted ideas as to the relations in question, but the summary of conclusions at the end of the chapter based on deductions from the preceding discussion of the association between accommodation and convergence, is logical and practical. It would not come within the scope of this review to give them, and the reader is referred to the book for these valuable rules.

Chapter four gives directions for developing the weak muscles by systematic exercises, which he prefers should be rhythmic and not continuous as commonly practiced.

Chapter five considers the law of projection. It differs from the one usually taught, viz., through the nodal points of the eye, and makes it vertical to the retina, thus: "Every object seen must be on a line vertical to that part of the retina receiving the impress of the light, regardless of the direction of the axial ray in the eye." This is illustrated by a drawing.

The next chapter on the "Monoscopter," a word of his own coining or horopter, is based on the preceding "law of projection." In Part II. of his book, Savage reproduces in chapter I., his article on the "Conditions in Heterophoria," calling for surgical interference, viz., diplopia produced by a red glass over one eye. This he has latterly modified somewhat, operating in much less degrees of insufficiency after Dr. Steven's methods. The second chapter of Part II. is a paper read before the Pan-American Medical Congress, Section of Ophthalmology, advocating the complete suspension of the accommodation in determining refraction. Savage's positions are well taken in this paper, and it should be carefully considered by all engaged in adapting glasses. The more honorable class of opticians should well consider the suggestions of this paper. Part III. is given to the description of certain operations which need not be given in this review. Dr. Savage is a painstaking and careful observer, very sanguine and enthusiastic in whatever he undertakes, and while he may be in error as to some of his positions, our progress in ophthalmology is due to the labors of just such men.

T. E. M.

The Era Key to the U. S. P.—This work is intended to assist physicians and pharmacists to familiarize themselves with the contents of the new United States Pharmacopœia, and further the introduction and employment of official drugs and preparations.

It gives, 1, a complete list of all drugs and preparations in the new U. S. P.; 2, the common names and synonyms of each drug and preparation; 3, the parts employed; 4, the doses in both apothecaries' and metric systems; 5, the preparations in which the drug is employed. Published by D. O. Haynes & Co., Detroit, Mich., price 25 cts. per copy, postpaid.

Unsoundness of Mind in its Legal and Medical Considerations. By J. Hume Williams, Esq., of the Middle Temple, Barrister at Law, London, is a reprint of merit and value to lawyers and doctors who may be engaged in medico-legal trials. It is entertainingly written and is replete with historical fact and precedents, for both lawyer and physician.

The first chapter treats of the prevailing legal and medical views on the subject of insanity, contrasts them and draws the deductions in the direction of judicial advance. The second chapter is on "Monomania," so-called, the third on "Moral Insanity," the fourth on "Impulsive Insanity" and the fifth and last chapter contains "Further Observations on Insanity in General Before the Courts." Wm. Wood & Co., of New York, are the publishers.

The term "Unsoundness of Mind," it is scarcely necessary to remark, is here used with more than usual latitude, to include the insanities, as well as with more than ordinary medical limitations, for it excludes idiocy and the different grades of imbecility.

Some Remarks on the Insanity of the Aged, is the caption of an interesting paper by Dr. Frank Parsons Norbury, Jacksonville, Ill., Lecturer on Nervous and Mental Diseases, Keokuk Medical College, Keokuk, Iowa, late Assistant Physician, Illinois Central Hospital for Insane, Jacksonville, read before the Section of Neurology and Medical Jurisprudence, American Medical Association, at Milwaukee, Wis., June 8, 1893, in which the propositon is maintained that "the tenure of normal mentality in old age depends on the sum total of vitality originally deposited and the maintenance of normal equipoise in the brain machinery, during the years of active engagements in the affairs of life." The author aims in this *brochure* also to differentiate between senile dementia proper and the insanity of senile atrophy.

"Indeed, all things considered," he says, "it seems to me that chronic cerebral atrophy, so often classed as senile dementia, is the most prominent type of senile insanity encountered in institution practice. It is deserving of consideration because it is seldom, if ever, given in hospital reports as a form of senile insanity having a distinct pathology and recognized symptoms."

We may find space for the article entire in a subsequent issue.

A Treatise on the Medical Jurisprudence of Insanity, by Edward C. Mann, M. D., author of "A Manual of Psychological Medicine," is a plainly written and instructive guide for the legal profession and for medical men who testify as experts before courts. The book is less voluminous than the author's psychological medicine.

The author's chapter on "Injury of the Spine Affecting the Mind" is a good one, and for the first time the subject of spinal concussion in its psychical effects and relations has found its way into forensic psychiatry, in a treatise on this subject. The book is sprightly, clear and practical, and fairly complete for the present rapidly progressing psychological

age. For such we cordially commend it to the seeker after clear forensic light in the problems of morbid mind.

This is Not an Apology, is Dr. Wm. A. Hammond's reply to Parke, Davis & Company's "Apology," with which our readers are familiar.

We do not care to go into the merits of this controversy, but we give the following, which though not altogether relevant, is of importance for professional consideration:

"It is certainly not to be expected that I should gratuitously provide the public with animal extracts any more than that I should give them my books. Pasteur, Brown-Séquard, Koch and others who have made important discoveries in medical science are surely entitled, while creating no monopoly in any healing process, to reap some pecuniary reward from their labors, and the propriety of their so doing has never been questioned. Would it be just and right that Dr. Marion Sims, Dr. Weir Mitchell and others who have advanced therapeutics, should refrain from establishing hospitals in which their peculiar methods of treatment can be carried out under their own supervision? Do we not all expect something more than mere thanks for our work?" We think the laborer is worthy of his hire whether doctor or pharmacist.

The Funny Bone.—If you wish a few mirthful moments of laughing respite from professional cares, put half a dollar on the end of your hook and fish for the "Funny Bone," a witty, pictorial publication, illustrated by Dr. Crusius, of St Louis, who carries the cross of life's cares lightly, and published by the Funny Bone Publishing Co., of the same saintly city. Crusius crucifies the crooked doctor and the liver-pad man with pictorial piquancy, and pungently pricks the professional follies of mankind in general with such keen sarcasm of an accomplished wit as to make the life of the hardest-worked M. D. worth living for awhile, at least, while he reads the humorous, witty text, and scans the laughable caricatures of this unique publication.

The book is a *eunuch* production in which the humorous and the funny bone appear to have gone off together on a lark in a manner peculiarly *secundum artem*.

The Supreme Court of the States and Provinces of North America is a work intended to embrace each State and Territory of the American Union and Province of the Dominion of Canada, and to contain an historical sketch of the Supreme Court, prepared either by the Chief Justice or some member of that bench, or of the bar, under his supervision and direction, with sketches and portraits of the Chief and Associate Judges, and sketches and portraits of former judges of that Court.

Reed & Carnrick's Memoranda of Highest Awards and Medals at the World's Fair, Chicago, for "Carnrick's Lacto-Preparata, Carnrick's Soluble Food, Kumysgen and Pancrobilin."

Something Entirely New; Insane Asylum Gossip.—This is a large book containing accounts of all the "Scrapes" of which officers, attendants and patients of The American Institution for the Insane have been guilty for the last quarter of a century. Price $1.00, six for $5.00. Any physician or attendant ordering this book and not being satisfied with it, can return it and money will be refunded. Send orders to Dr. Wm. McKee, Hamilton, O.

Sajous' Annual of the Universal Medical Sciences continues to maintain its claim to professional appreciation through its yearly presentations of medical progress. We can only reiterate the good opinion formerly expressed of previous editions of this epitome of medical advance, and say what we have in substance said before, if not literally, viz., it deserves a conspicuous place in the library of practical reference of every physician.

Index Catalogue of the Surgeon-General's Office, Vol. XIV. —This work continues to maintain its highest standard of merit, and is a monument more enduring than brass or marble to the industry and professional zeal of the Surgeon-General's Office of the United States Army.

Lippincott's Magazine.—Among the many good things of the January, 1894, number of this popular magazine, it presents reminiscences of Rachel, Fanny Kemble and Charlotte Cushman, by Mrs. Sherwood, personages always interesting to the psychological student of the stage.

Physician's Visiting List.—The ideal physician's visiting list is Lindsay & Blakiston's, for 1894. Address P. Blakiston, Son & Co., 1012 Walnut Street, Philadelphia, if you wish its assistance in keeping your accounts and memoranda.

A Study of the Influence of Chloroform upon the Respiration and Circulation.—A Contribution from the Laboratory of Experimental Therapeutics of the Jefferson Medical College of Philadelphia. Being a Report to Surgeon Lieutenant-Colonel Edward Lawrie and to the Government of his Highness the Nizam of Hyderabad. By H. A. Hare, M. D., and E. Q. Thornton, M. D., Philadelphia.

Cases of Myxœdema and Acromegalia Treated with Sheep's Thyroids; Recent Observations Respecting the Pathology of the Cachexias following Disease of the Thyroid; Clinical Relationships of Graves's Disease and Acromegalia. By James J. Putnam, M. D., Boston.

Results in Ninety Cases of Pulmonary Tuberculosis, with a Comparison of Results obtained with and without the use of Tuberculin. By Karl von Ruck, M. D., Asheville, N. C.

A Clinical Lecture on, 1. Case of Polio-Myelitis; 2. Case of Chorea; 3. Case of Sacro-iliac Arthritis, etc. (probably Rheumatic). By J. T. Eskridge, M. D., Denver, Colorado.

On Certain Peculiarities in the Reactions of the Musculo-Spiral Nerve to Electrical Currents; and their Practical Significance. By James J. Putnam, M. D., Boston.

Transactions of the Medical Association of the State of Missouri at its Thirty-sixth Annual Session, held at Sedalia, Mo., May 17th, 1893.

Hemiparaplegia; with Report of a Case Completely Recovered after One Year's Duration. By L. Harrison Mettler, A. M., M. D., Chicago.

The Surgical Treatment of Chronic Tympanic Vertigo, often Miscalled Ménière's Disease. By Charles H. Burnett, M. D., Philadelphia.

A Study of the Temperature in Twenty-five Cases of General Paralysis of the Insane. By Frederick Peterson, M. D., New York.

Degenerazione Del Midollo Spinale, Nell' Avvelenamento Sperimentale per Fosforo. Dott. Raffaele Gurrieri, Nell' Emilia.

Report upon the Pathology of a Case of General Paralysis. By C. L. Herrick, Professor of Biology in Denison University.

A Case of Dislocation of the Fourth Cervical Vertebra without fracture. By A. M. Holmes, A. M., M. D., of Denver.

A Plea for the Amelioration of Insane Women Suffering from Local Disorders. By W. P. Manton, M. D., Detroit, Mich.

Proceedings of the Forty-Ninth Annual Meeting of the American Medico-Psychological Association, held at Chicago.

The Pneumatic Cabinet in the Treatment of Pulmonary Phthisis. By C. E. Quimby, A. M., M. D., New York.

Ueber Anwendung des Ichthyol bei Angina. Von Dr. Leopold Herz, Regimentsarzt in Pilsen. Hamburg, 1893.

Fifth Annual Report of the Health Department, of Mansfield, Ohio. R. Harvey Reed, M. D., Health Officer.

Mechanical Aids in the Treatment of Chronic Forms of Disease. By Geo. H. Taylor, M. D., New York.

Proposed Rules and Regulations of the Medico-Psychological Association, of Great Britain and Ireland.

Case of Syringomyelia, with Necropsy. By James Taylor, M. A., M. D., Edin., M. R. C. P., London.

Some Practical Experiences with Muscular Anomalies. By T. E. Murrell, M. D., St. Louis, Mo.

The Role of the Posterior Urethra in Chronic Urethritis. By Bransford Lewis, M. D., Saint Louis.

The Legal Question in Operations on the Insane. By Walter P. Manton, M. D., Detroit, Mich.

Report on Nasal Surgery with Illustrated Cases. By M. F. Coomes, A. M., M. D., Louisville, Ky.

Remarks on the Writings of Louyse Bourgeois. By Hunter Robb, M. D., Baltimore, Maryland.

Current Fallacies about "Nervous Prostration." By Dr. Ludwig Bremer, of St Louis, Mo.

Exercise for Pulmonary Invalids. By Charles Denison, A. M., M. D., Denver, Colorado.

Aural Vertigo (Méniere's Disease). By L Harrison Mettler, A. M., M. D., Chicago, Ill.

Fourth Annual Report of the State Commission in Lunacy of the State of New York.

The Treatment of Degenerative Psychoses. By Jules Morel, M. D., Ghent. Belgium.

Results of Aseptic Celiotomy. By Wm. H. Wathen, A. M., M. D., Louisville, Ky.

A New Holder for Sims Speculum. By B. H. Daggett, M. D., Buffalo, N. Y.

Geistesstörungen bei Syphilis. Von Professor Paul Kowalewsky, Charkoff.

Traumatic Neuroses in Court. By Dr. L. Bremer, St. Louis, Mo.

Polio-Myelitis. By J. T. Eskridge, M. D., Denver, Colorado.

On the Treatment of Chorea by Exalgine. By Dr. Moncorvo.

Der Untergang Israels. Von einem Physiologen. Zürich.

Concerning Posture. By B. H. Daggett, M. D., Buffalo.

Inebriety. By R. M. Phelps, M. D., Rochester, Minn.

THE

Alienist and Neurologist.

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ORIGINAL CONTRIBUTIONS.

INSANITY IN RELATION TO LAW.*

CASTRATION FOR CRIME.

THE "KNOWLEDGE OF RIGHT AND WRONG" AS A TEST OF IRRESPONSIBLE INSANITY.

By C. H. HUGHES, M. D.,

Late President of the Neurological and Psychological Section of the Pan-American Medical Congress.

LONG before the real nature of insanity was understood, statutes were framed, defining the legal relations of the insane and fixing in their behalf exemptions from the ordinary penalties of violated law. As might have been expected from the then vague conceptions of the real nature of mental disorder, it having been so long and early regarded as something that had fallen upon man from without, as the result of wrathful deities offended, or satanic visitations, instead of the natural consequences of a diseased organism, the municipal laws so framed were often lacking in adequate sympathy for those afflicted creatures, and inadequate to their just protection. Statutes thus early framed and legal precedents thus early established, independent

* First read before the Tri-States Medical Association, at St. Louis, October 27th, 1881, and printed in the *Medical and Surgical Reporter*, November 26th, 1881. This paper is republished here to show priority over some recent publications on the subject of castration as a remedy for crime and the author's views on the "right and wrong test of insanity."

of medical opinion, and in fact long before medical men had themselves cast off the shackles of popular prejudice and acquired accurate notions respecting this disorder, have been slow to change in conformity to the corrected and just views of enlightened science; for law is remarkably conservative in its instincts, blindly reverencing the mouldy precedents of the past and jealously guarding her sacred precincts against the profane presence of audacious science that dares to dispute the rulings of courts on matters of disease. This conservatism has displayed itself at times in unwarranted prejudice against our humane and progressive profession, causing eminent jurists, forgetful of the prerogatives of science and the proprieties of the court-room, to tell distinguished physicians that they had better be at home with their patients than away from them to instruct courts and juries in matters of disease, as if such vocation were the province (much as physicians really dislike the duty) of any other than the physician. That time, however, is past, and no English judge in our day would have the effrontery to adopt this discourteous precedent and apply it to the medical expert, for though law has pesistently resisted the encroachments of enlightened mental science, it has now and then, here and there, reluctantly yielded some of its ground, until, comparing the present with the remote past, the thrust of the scalpel of scientific medical truth has effectually penetrated the judicial ermine and touched the heart of law, not, however, until after much innocent blood had been shed in its name.

In the legal mind theoretical conceptions of what mental conditions pathological states ought to produce, have been permitted to supplement and supplant observed facts in mental pathology, and judicial decisions most absurd have, in consequence, in the light of clinical observation, been promulgated, and continue still to deface the records of the judiciary.

However strenuously the latter may strive at and assert a consistent harmony with past precedents, its decisions

have not been consistent, and can never be so until, in questions of mental derangement, they are made to harmonize with the facts of disease, and these facts must come from those alone who are competent, from daily habits of observation and thought, to enlighten them; from those to whom the thermometer and sphygmograph, the lens and test-tube, crucible and dissecting knife, are familiar aids to observation and reflection, and in whose minds mere theories of the possible, habitually yield to demonstrable facts—the skeptically-minded physician, whose constant habit it is to search for physiological and pathological laws more unvarying than dicta of courts, and when he finds them, to willingly surrender his preconceptions to the higher statutes of unerring nature.

Pursuing a different method, while all the time asserting their consistency, courts have "successively abandoned or resumed one principle after another, either with the strangest disregard of consistency," says the distinguished Dr. Ray, or "the most extraordinary ignorance of previous decisions;" and he makes a scathing arraignment of the English judiciary for its inconsistent attitude, in different historic trials, with reference to the knowledge of right and wrong test, in which the plea of insanity was interposed to exempt from crime. Thus in the famous trial of Hadfield, for shooting at the king in Drury Lane Theatre, in 1800, he says it was abandoned, but reaffirmed in that of Bellingham, in 1812, where the offense was committed, passed upon and punished with death, and the body of the condemned dissected within eight days; abandoned again in the trial of Martin in 1831, and reaffirmed in 1837!

This scathing arraignment by one of the world's most distinguished writers on the medical jurisprudence of insanity, would not have been possible had law been more becomingly modest with reference to questions medical, and more deferent toward that profession which is competent to and should of right, enlighten law on questions of disease, whether the coarser bodily functions are alone involved by it, or the subtle operation of the mind.

"On the trial of Hadfield," says the distinguished medical author just referred to, "there occurred for the first time in an English court, anything like a thorough and enlightened discussion of insanity as connected with crime, and the result was that a fatal blow was given to the doctrine of Lord Hale, by Mr. Erskine, who brought all the energies of his great mind to bear upon the elucidation of the subject. (Lord Hale's idea was, that all felons were under a degree of insanity, and that monomania did not excuse crime any more than a child of fourteen could be excused for treason or felony.) But even the great Erskine overthrew one legal error by another, that of delusion, a criterion of mental irresponsibility that has caused to be judicially executed, as well as saved, many a hapless victim of irresponsible disease.

Just as the legal test of responsibility still reiterated from the bench, namely, "a knowledge of right and wrong," if insisted on, would have convicted Hadfield, subsequently Oxford, and still later others, for shooting at the British Sovereign, Lawrence for attempting the life of President Jackson, poor Freeman, of Pohasset, for the murder of his child; so the other criteria of criminal irresponsibility, when exclusively demanded as the only evidences of mental disorder, have sent their scores of innocent victims to stake, guillotine or gallows. The past history of the jurisprudence of insanity, until a comparatively recent date, has been a record of justice and crime against humanity, about equally apportioned; and even now, prejudice against an often just but sometimes wrongly used plea, and predilection for methods of investigating mental phenomena, and determining responsibility not warranted by medical experience, bias judgments, color instructions of courts and shape methods of legal procedure to the hurt of the weak and irresponsible whom it is the bounden duty of the State to protect. Something of that feeling which prompted Lord Brougham to believe that the fear of punishment would deter from crime those persons of deranged intellect who hover

around the courts in search of redress for real or fancied wrongs, seems yet to influence some of the learned judges of our time; for there are cranks in our own day, as there were then, who hover on the border line of insanity, and finally pass over into positive mental disease; and this disposition to punish in order to prevent morbid eccentricity, passes in many instances to the absurd extent of seeking to restrain the lunatic by legal penalty; though it must be conceded that some insane persons are, in a limited degree, sometimes amenable to deterrent influences, like some of the inmates of asylums; but in general, punishment is futile to restrain the erratic displays of unstable mental organisms, for disease and not reason, is the propelling influence.

There are, however, methods humane, and they ought to be made lawful, by which insanity may be abridged, and the great horde of neuropaths that follow like sick and wounded stragglers of an army in the march of civilization reduced in number; methods that would leave no stain of blood on the judiciary, no foul blot of murder on the State's escutcheon; but to learn them, law must submit to be taught by our science.

The neuropathic diathesis, the insane constitution, that breeds its like and burdens the State with hereditary imbecility, idiocy, insanity, deaf-mutism, and the lesser degrees of mental defects, must be made the subject of statutory enactment and enforced law; sentimentality must yield to fact; the teachings of nature must be decided and as sternly enforced as her own unerring edicts are Why should confirmed drunkards be permitted to beget a race of imbeciles, epileptics, idiots or criminals? Why should the life-long criminal and the pauper be allowed to go on reproducing his defective kind, the lunatic likewise, and all the mentally-maimed of whatever degree, especially when by forfeiture of liberty they fall under proper custody of the law; and why should generation after generation of these miserables be allowed to be brought into being to become either burdens of the

State or victims of its misdirected vengeance, when prevention is possible, and better for the State, and only justice to the helpless and prematurely doomed to an unchosen existence worse than death? If municipalities may lawfully quarantine yellow fever and cholera, why may not, and why ought not this greater destructive agency than plague or pestilence, which never ceases its ravages—the hereditary descent of the organically vicious and defective—be stopped by law? No pestilence that ever walked in darkness or destruction that has wasted at noonday has done greater harm to mankind than the silent, ever active destructive power of hereditary degeneracy of brain and mind. Instead of visiting punishment on the heads of these weakened victims of entailed disease, let law go to the *fons et origo*, and stop this vicious progeny from being thrown upon a world in which they are unfitted to live.

When law shall interdict the marriage of these defectives, *and by other means prevent their propagation;* when the race of each is run the career of his kind is ended, and society is no longer annoyed, perplexed and burdened.

*For certain of the criminal class, and for certain defectives to whom liberty might be given, surgery suggests a plan less radical than that of Lycurgus, and more effective, and more appalling to real crime than guillotine or halter; equally conservative of mental and moral health, and in some instances absolutely curative of the individual. If a life is forfeit and only blood will suffice, let it be thus compromised.**

* This is certainly the best legal and moral remedy for certain crimes (rape, etc.), because it is physiological and everlasting. It goes to the roots of such evils and destroys the lecherous seed that would otherwise germinate in coming generations of unrestrained lust and vicious lasciviousness. In the conservation of the sexually fittest to live and the emasculation of the sexually unfit, lies the preservation of the human family in civilized communities from degrading contamination. When psychical moral inhibitions are so deteriorated in the individual that the lower centers of the cerebro-spinal axis dominate him, and he is no more governable than a mad bull, it is better to castrate than to corral such, just as it is better to shoot than to lasso the bull. Society is no safer from the rapist while capacity and will power remain with him, than from the wild bull with his horns. The whole vicious

To avoid the errors into which courts have fallen with reference to the question of mental derangement, physicians should seek, in every case of suspected or pleaded insanity, for disease of brain, impairing the mind; for, as in a healthy brain, the disturbed brain circulation, anomalous pulse, disordered heart, the persistent insomnia, sluggish bowels, altered renal and other secretions, voracious or variable appetite, gastric, hepatic and other conditions, ophthalmoscopic and æsthesiometric revelations, the changed pupil, facial expression, temperature, voice, and skin in certain cases, the altered demeanor, intellectual and moral, the unnatural actions explainable only by disease or simulation of disease of brain and mind are to be sought for and considered—for even the courts concede that mental disorder is the result of disease. Singularities of conduct, or even hallucination, illusion or delusion, do not necessarily constitute insanity; they are not insanity *per se.*

That patient and laborious search which ought in every case to be made where insanity is pleaded or suspected, if it fail to reveal disease, will often bring to light rational, though base and sometimes unsuspected and startling, motives, sufficient to satisfactorily explain the most horrible violations of Divine and human law. Every human fiend is not insane, though insanity would be a most charitable mantle to cast over all human depravity, if we could honestly thus shield the wickedness, as we may often so shield the wickedness of mankind. So that while many singular, immoral, unjust, and unlawful actions are the results of disease, and only thus explainable in certain persons, similar conduct in others, apparently the product of insanity, when hidden motives are brought to light, appear quite rational and absolutely explainable upon no other hypothesis than that

blood should be cut off, and the only Christian compromise with Judge Lynch is castration. These are my views to-day as they were in 1881 and before.

Missouri in the days of slavery had a law favoring emasculation for rape, which ought to be revived. It was a mistaken feeling of humanity that repealed it. It should be revived and applied to white and black alike. Radical remedies are best for organic vice.

of entire mental soundness, instigated and impelled by immoral and criminal motives, but not resistless disease.

The subject is clear enough if mental disease be readily apparent, but extremely difficult sometimes when the disease is obscure, or has only been active at some remote period in the individual's life or ancestral history; in such cases, our search must be the more patient, deep and thorough.

ADDENDUM, 1894.

Especially must our search be diligent and our knowledge extensive and deep of the many varying and intricate phases of mental aberration as we may discern them, if we are true experts in psychiatry, in the singular alternating automatism and peculiar psychical equivalents of epilepsia as seen in larvated and masked forms of *grand* and *petit mal* and in the semi-morbid automatisms, abnormal impulsions and trance states of dipsomaniacal inebriety, as well as in those peculiar and least of all properly understood and appreciated morbid impulsions of moral insanity with reason apparently *intact* while the affective life—the impulses, the propensities, the passions, once regulated by the higher moral inhibition, now in riotous control because of the invasion of disease in the once dominant and regulative psychical centers of the cerebrum. Likewise must we study deeply and observe extensively and with care if we would comprehend the varying forms and phases of paranoia, or *primaire verrucktheit*, and certain grades and degrees of imbecility.

On the Means of Preventing and Evading Insanity.

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Part I.

It is customary to deplore the condition of a man whose destiny has been formed by his ancestors, and genealogies have been published showing a progressive deterioration following generation after generation, until the race becomes extinct through depravity, insanity, imbecility, impotence, or deaths in infancy. It should, however, be kept in mind that these genealogies represent a particular series of events rather than a general truth. In some houses, no doubt, nervous diseases are much commoner than in others and the neurotic strain may persist till the family becomes extinct. Some families too give a much larger proportion of lunatics than others. But often such families do not tend to become extinct. I have found as the result of careful inquiries that they have not unfrequently an unusual fecundity, and though some of their members become idiotic or insane, there are others sufficiently healthy to keep up the breed. Then there are families with a marked neurotic heredity in which the morbid proclivity seems in time to wear itself out; fewer members are born idiots; fewer become epileptics or lunatics, and at last all the survivors seem healthy, or at least free from nervous diseases. Then again, in families where the hereditary neurosis seems inveterate, it scarcely ever happens that all the children are idiotic, insane, or epileptic. Some members appear quite sound though there is a risk of their transmitting the hereditary evil to their descendants. This shows that there are conditions which save some of the children

from the hereditary proclivity; or, to look at it in another light, we may say that the hereditary predisposition requires to be reinforced by accessory causes to bring out its baneful effects. What these conditions are is only known to us in a general way. Sometimes they are very obscure; but it is the duty of physicians to discover their nature and to take advantange of them, so as to save the progeny from the threatened misfortune. When the hereditary tendency is very powerful genetous idiocy is liable to occur. One case is well known to me in which a woman had three boys who were all imbecile. One boy was sensible enough, and there were several girls who were all intelligent, and indeed rather clever. The neurosis followed the father's family. The mother, who was bent on getting her daughters married, used to dwell much upon some accidents or depressing influences which had attended the birth of the boys, and it is possible that these may have had their effect, although the mother's contention that the imbecility of the three boys was purely due to accidental causes could not be admitted. A young man got engaged to one of the daughters without knowing the condition of her brothers. When he found it out he consulted a physician, who advised him to give up the idea of marrying the young woman. He intimated his intention of withdrawing, but afterwards changed his mind and married the girl. The next daughter allowed her photograph to be sent to a man in a distant colony who wanted a wife. The photograph pleased, and the girl crossed the sea to meet her promised husband. Such marriages should of course be avoided. I have known them followed by dismal results; but when the children are born idiotic or imbecile preventive measures are too late. The children are doomed all their lives to be under the care of others, and should have a special nurture and training which we need not now consider. But there are children in whom, though the morbid influences do not appear so speedily, yet the germs of insanity can be discerned at an early age by a skilled

observer. The picture presented by continental psychologists of a morbid strain showing itself here and there in the child's demeanor and conduct accompanied by nervous symptoms has been rejected by most of the alienists of Great Britain. Nevertheless it seems to me to express a profound truth, which when one has got a glimpse of it, can never fade out of his mind as long as he practices medicine. Whether we call this primäre verrückheit, paranoia, or developmental insanity, it expresses a real series of events which anyone who has the time and opportunity may recognize. There are some children born in whom an experienced physician discerns that there is a serious danger of their insanity. This danger is so great that their up-bringing and education should be arranged from infancy to avert mental shipwreck. Such children often bear the marks or *stigmata* of hereditary degeneration though not always. It will more frequently be found that insanity, idiocy, epilepsy and other nervous disorders have appeared in their ancestors, or in their collateral relations. Now what species of education should be given to them, and what precautions should be taken to prevent circumstances exciting or seconding the predisposing cause?

Such precautions should commence with the care of the mother during the months of pregnancy. She should be guarded from exhausting work, alarms and annoyances, and kept in the healthiest and most cheerful condition. The incitements now held out to women to share the work and anxieties of both sexes is dangerous both to themselves and their offspring. The mother should not seek to put her own nervous system into a state of morbid tension, nor withdraw for the use of her own overworked brain the nourishment needed for the brain of the child she is bearing.

As regards training in infancy and youth the precautions heretofore recommended are more those of general hygiene than of any special knowledge. In this department of medical science the world has made

very little progress through the course of the ages, and indeed it has sometimes gone backwards through prejudice springing from sensuality or the rebound of asceticism.

Two thousand four hundred years ago very sagacious notions on diet and regimen had been evolved by the Greek physicians and trainers for the Olympic and Pythian games. They knew not only the best means of rearing men in perfect health, but the best means of fitting them to excel in athletic exercises, and the results were probably as successful as any we can boast of in our own times. In one respect it was an unfortunate discovery said to have been marked out by Herodicus,* a contemporary of Socrates, that by the observance of special rules for eating, "the human body could be made, not healthy and beautiful, but muscular and adapted to this and that special exercise. He no doubt improved the speed of the races and the skill of the wrestlings, but he spoiled athletics as a means of education for life and happiness." Nevertheless the knowledge thus gained was not lost, as may be seen by a study of the extant works of Greek physicians.

Attentive to the harmonious development of all the human faculties, the Greeks noticed that eating large quantities of animal food, though it made men able to perform muscular exercises, had a tendency to render them dull-witted. There has been a considerable change within the last thirty years in the views of medical men about the value of flesh meat. In 1865 I published a pamphlet, "What Food to Eat," in which I combated the notion that a considerable portion of butchers' meat in the dietary was necessary for bodily health and mental vigor, and pointed out that the dietary of the upper classes in England was often a hazardous defiance to the laws of health. Little attention was paid to my arguments; but years afterwards the same views were adopted by others, and it is now recognized by some of our most eminent physicians that animal food is for many persons

* See "New Chapters in Greek History," by Percy Gardner, London, 1892, P. 300.

of a too stimulating character, and tends to increase nervous disorders. This change of opinion was in part owing to the writings of the late Dr. Edward Smith, the author of "Cyclical Changes in the Human System." My friend Dr. Clouston, in his well-known "Clinical Lectures on Mental Diseases," has taken occasion to point out the evil effects of a flesh diet with neurotic children. I should recommend that, if given at all, such food should be very sparingly given to children who have a tendency to nervous disease or mental instability. Their diet should be frugal and unstimulating. Wine, beer, tea and coffee, articles which change the tone of the nervous system, should be alike forbidden. It is a good thing to teach a child to satisfy his thirst with water. People should spare no pains, no expense, to have pure water. How often is this neglected. The greatest and richest city in the world derives its supply from the filtered water of two very dirty rivers, hence most of the Londoners have given up drinking water, though the sums they yearly spend in beer and other liquors would soon pay the cost of a plenteous supply from untainted sources.

In neurotic children cocoa may be allowed, especially as it is a fattening food; but the basis of their diet should be milk and the cereals. They should be put early to bed in order that they may sleep well and rise early. Such children should have a good deal of sleep, with regular open air exercise to make them weary at night. It is advisable that they should live in the country, especially amongst the hills. Such simple rules are easily taken up by those who are willing; but there are perplexing questions connected with education. Some writers deprecate the severity of ordinary pedagogic training, and enlarge on the evils of over-strain in education. To escape such evils some would only teach children what they are willing to learn, or what appears to interest them or catch their attention. But you cannot educate children for an ideal world, or alter the real

world to suit the tastes or laziness of the pupils. A good deal of harm may be done by driving a child too fast; but more harm may result from his being left behind in the race, or left out of it altogether. Children educated at home often acquire a great deal of miscellaneous information through the spontaneous exertion of their intellect; but the valuable thing they learn at school is concentration of mind, the habit of directing the mind to know a thing in an exact and complete manner. Children educated at home generally manage to escape the unpleasant parts of tuition; but these are sometimes the most useful. I have noticed that persons educated by tutors or governesses are generally bad spellers. It is natural enough that a child should dislike learning to spell. I grant that the spelling of English words is absurd, and would have it changed for a phonetic one; but this could only be done by a general consent, and in the meantime it is a great drawback not being able to spell correctly. Arithmetic is another important subject which some children have a great dislike to learn, and weak-minded children have a peculiar deficiency in arithmetic. There is no harm in making education as pleasant as possible; but it should be pushed steadily onwards and most children will always prefer play to learning. It seems to me an error to begin a formal education before they are seven years old. With children backward, neurotic, or difficult to deal with, there is a temptation to suit their tastes by cultivating some one congenial talent, such as music or drawing. The result, being out of proportion to their other faculties, is sometimes striking; but the success of such pupils is seldom considerable, if compared with that of really sound and clever children, and a single accomplishment is not education. Swedish drill, which cultivates all the muscles, is very useful in bringing the body under the control of the will. In any case such children should not be laden with useless learning. Nothing should be taught which does not enter into their life and work, and has a good prospect of being finished.

Some children of an explosive character are bright and original, and sometimes learn quickly; but they should not be subjected to the strain of competitive examinations. I have known some dismal calamities to follow failure at these trials. A certain amount of weakness of intellect or explosiveness of temper will render a child unfit for an ordinary school. With other children of a neurotic tendency a solitary education is apt to encourage morbid shyness, and in some unruly children the habit of obedience in a large school has a salutary effect. It is a loss to miss but the action of imitation and sympathy in education. In training backward or unstable children one should always bear their frailties in mind; but these frailties should not be made a bar to education or an excuse for undue indulgence.

Sanity means a power of adaptation to the conditions, wants and conventionalities of modern society. If a child cannot be trained or broken into these, it will grow up insane. One might think that sometimes fond parents are trying to perpetuate the infantile condition. By giving the child everything he cries for and yielding to his outbursts of passion, they increase the inordinate impatience of its desires and caprices. The reason is never brought into play to regulate conduct and the power of restraint is never cultivated.

Dr. E. Bérillon and others have used hypnotic suggestion against the vicious, dirty or untidy habits of neuropathic children, such as masturbation and enuresis. I must confess that I am chary of such procedures, as in subjecting children to hypnotism there is a danger of increasing the passiveness of their character and weakening the power of self-control. Nevertheless there are cases in which hypnotism may be justifiably tried. On this subject the reader will find much useful information in the *Revue de l'Hypnotisme*, published monthly in Paris.

One of the great objects of education should be the formation of character. The child should be taught in the first place that there are obstacles to human desires

which cannot be overcome, and that weeping, storming and sulkiness are not effectual means of gaining what it desires. The hardships which nature interposes have a certain educative power from which ordinary children readily learn; but with some it needs to be reinforced by simple advice and careful arrangements. In dealing with nervous and weakly children the hardships must never be more than they can bear. When a child is terrified at being left in the dark it is mere cruelty to deny it a light. It is better to wait until its nerves gain further tone; nevertheless in order to cultivate firmness of character you must risk something.

If you are consulted about regulating the conduct of children recognized to have some mental instability or a tendency to nervous disease, have the courage not to yield to the treacle sentimentality of the day. It would be well for humanity if those who bear rule could dispense with the deterrent influence of fear. Perhaps this may be done with some unusually intelligent and fine natures, but the lower the reason and the weaker the powers of restraint the less can we trust to the effectiveness of higher motives. An author, not without sense and knowledge in other ways, takes a pride in recording that he has seen violent obstinacy melted into contrition and obedience by the threat of the teacher that she would wipe from her face the kisses she had given her the previous day. Unhappily out of this picturesque event no useful general maxim can be framed. Even direr threats than this, though mingled with sugar plums, will not always answer. No doubt we should constantly bear in mind the child's peculiar frailty, and some will say we should err on the safe side. Here, however, there is no safe side to err on. We have to steer between the well-meaning cruelty of senseless people who mistake incapacity or morbid irritability for moral perversity which they would use force to overcome, and the more insidious fallacy that such children should be entirely exempted from punishment. Such children are not all of one

character; some of them are sturdy enough to bear corporal punishment, which has its effects when no other means will avail; for others who are frailer and too weak and irritable to be thus treated other means of deterrent power must be devised. It is a grievous mistake to let them think that they are beyond the reach of punishment. They soon begin to presume and practice upon such immunity. I have seen children of very low intellectual powers deftly learn to take advantage of the weak fondness and the fears of their parents. I have known children to terrify their mothers or nursery maids by striking their foreheads against the floor or biting their hands; but when under the charge of firmer persons who ceased to hinder them they soon gave up the practice.

Some writers teach that man is a mere automaton, swayed here and there by influences that he cannot control. There are children who are destined from birth to a life of crime, and others with a fatal proclivity to become insane. They point out certain external deformities, which indicate deeper cerebral deficiencies. Without denying all significance to such marks of degeneration, we hold that these observers have assumed and asserted much more than can be proved from their narrow premises. As this paper is to be devoted to treatment we have not time to discuss the nature of the human will or how it is influenced by antecedent motives. We set out on the assumption that we can so dispose our thoughts and actions as to seek influences which we recognize as salutary and agreeable and can avoid doing actions, placing ourselves in situations, or forming habits which are injurious to our welfare. However cleverly the fatalist may speculate, he is never ready to make his philosophy practical. Even supposing one to hold with the criminal anthropologists of the Italian school that certain children were born to vicious or abnormal courses this view would assuredly not be acted upon. In "Butler's Analogy" there is a sagacious chapter "On the Opinion of Necessity Considered as

Influencing Practice," in which he points out the difficulties which would beset a fatalist who had tried to educate a child in his own principles. Supposing we put apart those children who bore the most decided marks of a criminal heredity, could we bring them up in the idea that because they had some deformities in their palates, orbits, or ears, that therefore it is useless to expect them to conform to the rules of morality, and that they ought to be exempted from blame when they transgress? Thus, although it be believed that the doctrine of their inborn depravity was speculatively true, yet in educating them one must act as if it were false. This may well arouse a suspicion that there must be some flaw in the speculations of these philosophers which renders them unfit to bear the test of real life. A craving for alcoholic stimulants is a bad heritage, but it is a sad mistake to regard it as a fatal proclivity. In a pamphlet "On the Heredity of Crime," Dr. Thomas M. Dolan observes:

> It is easy to use terms; to speak about dipsomania and the hereditary nature of the drink crave. Look around in whatever circles you may move and endeavor to count the numbers of persons you have known or heard of, who have died through intemperance, then try to remember or trace what was the fate of their children, girls as well as boys, for of course heredity must affect women as much as men. In the first place you will not be able to count so many, and then, I think, you will find that the girls have almost invariably escaped, and that occasionally the sons have gone headlong to ruin. I have paid some attention to this subject and having attended the death-beds of many drunkards, and signed the certificates of death, I may tell you my experience—the children escaped in the vast majority of cases, and the girls almost invariably escaped. Now, why should the girls not suffer? Because the education of the girls is different, though the temptation may not be less. Habit fixes abstinence in the woman; she is not brought into such close, intimate relationship with drink; she has not to go into hotels and public houses to transact her business, and social customs do not press upon her the glass.

We know from those who have had great opportunities of observing that the children even of the worst criminals have not always the marks of degeneration, that sometimes such children turn out well in after life, and that it is impossible to distinguish those who turn out

well and those who do not. To generalize only upon the failures of society is a delusive process; to assume that these failures are inevitable is a dangerous error. Indeed it might be argued that these failures are a proof of the power of education, for habitual criminals have generally got in childhood a training in evil much more potent than in good.

There are children, born of respectable parents and separated from bad example, who are very eager to gratify all their desires and appetites, and very slow in recognizing moral rules and restrictions. These have been classed as cases of moral imbecility. I cannot here discuss the question whether this phrase be a happy one; but we may observe that moral conduct has always an intellectual side. I have always found such children to be also intellectually deficient. Save in utter idiocy the moral nature is never entirely wanting, though there may be great difficulties in its cultivation.

Those whose counsels direct the education of such children, or who have them under their immediate charge, should not be discouraged through failures. Hereditary tendencies are hard to overcome, and it is difficult to avoid mistakes or to keep the pupil away from bad examples, yet I firmly believe that a judicious education may, and often does, put a child past the dreadful fate of the lunatic, and that while ill-directed severity has driven children to frenzy, the weak fondness of doting or too timorous mothers has smoothed the way to the asylum. It was only the other day that I heard a fine-looking young man in a lunatic asylum say: "It is an awful thing to be an only son."

PART II.

Medical superintendents who scarcely see any cases of mental derangement save those who have been drifted to their asylums are apt to imagine that there is something fatal about the neurotic tendency; but there are many cases of evanescent insanity which recover without

requiring to be put under restraint, and others struggle with mental derangement for years before it overwhelms them. Sometimes insanity smoulders during their whole life; perhaps the question is raised by their heirs when their will comes under consideration. People seldom recognize that they are drifting into madness; but occasionally they do, especially in melancholia and delusional insanity. I have been consulted by persons who were oppressed by fixed ideas or by morbid delusions from which they could not escape. One man of high principle and honor had a sick wife, whose illness was of a most distressing character. He had, besides, other painful duties to attend to. He knew that these trials were aggravating his own melancholy, yet he was too conscientious to try to escape from them. Painful and repulsive ideas possessed his mind. He was afraid that one day they would so occupy his thoughts that he would be unfit for his daily duties, which were of a character requiring sustained exertion of the intellect. He was possessed of the fear that these involuntary impulses would burst into words. I had always a good hope that he would overcome the morbid current of his thoughts, and as he ceased to apply for advice, I think he must now be in a better state of mind.

In another case a man was possessed of the thought to injure his children, which nevertheless excited the greatest terror in his mind. His thoughts would give him no peace. He went from one physician to another, asking their advice. He said he would be glad to be admitted into an asylum, and even went to the superintendent of one and asked to be admitted as a lunatic, but they did not think him insane enough, as he recognized and fought against the strange ideas that entered his mind. I found out that he had a stomach disease, to which I was willing to attribute his distressing state of mind. I told him of this but it only increased his anxiety. His thoughts continually dwelt upon the malady in his stomach. I do not know what afterwards became of this unfortunate man.

The essential deficiency in many cases of insanity seems to be not so much the derangement of the intellectual faculties as a loss of will-power. This was long ago pointed out by Esquirol. The lunatic, he says, "No longer enjoys the faculty of fixing and of directing his attention, and the deprivation of this faculty is the first cause of all the others. In mania or general delirium the impressions are so fugitive and so numerous, and the ideas so abundant that the maniac cannot fix his attention upon each object or each idea. In monomania the attention is so concentrated that it does not regard the accessory ideas." In many initial forms of mental derangement the person affected has lost the capacity of dismissing some ideas and entertaining others. In some cases he is visited by a train of ideas, which pass through his mind unbidden, to be succeeded by others, many of which are strange and unexpected. Sometimes one idea, grotesque, disgusting or horrible occupies the foreground of his consciousness and will not be driven away. Gradually he loses all power of resistance so that he ceases to perceive the unreal character of these notions, or he may even yield to their suggestions and commit actions which betray the disordered state of his mind. Hallucinations may appear, the delusive character of which he may not at first recognize, till at last, from their vivid and persistent recurrence, or from the diminishing power of intellectual faculties, they at last overcome the doubt of their reality. In the first case the man is like one in a dream; in the second case, thought having passed into action he resembles a somnambulist or a hypnotized person. Nothing in the patient's demeanor may suggest doubts of his sanity, or he may seem to be in a moody or confused condition; but in a moment the restraining power is snapped, and he commits some impulsive action. Nevertheless it does not follow that when the control of the will is slipped in one case, that it has entirely lost its power in all. The patient may be able to restrain himself on ordinary occasions and yet indulge in outbursts

which are all the more dangerous on that account. Many of the assaults and homicides in asylums are committed by people who are thought to be harmless. It is well known that patients can keep their delusions out of sight when they have a purpose to serve. If examined, for example, by a physician they will assume such an appearance of reason and moderation as to utterly baffle an experienced physician, even when he is aware of their delusions and wishes to lead them on to it, and they often succeed in convincing people with no acquaintance with insanity that they are quite right in their minds and unjustly put under restraint.

To persons with a tendency towards mental derangement it is of great advantage that they should be under the guardianship of someone who recognizes the danger and does his best to shield them from it. In this respect it seems to me that women and persons under the protection of others have generally a great advantage, and those who under pretence of freeing women from what they call subjection wish them to enter without support into the hard battle of life, are exposing them to dangers which they might more prudently avoid. In many cases, however, the neurotic has no such protection. His parents die, or are obliged by the necessities of life to throw him upon the world. He must struggle with his kind, learn by bitter experience the selfishness and hyprocrisy of mankind, meet with defeats and disappointments—to him doubly cruel, and endure real annoyances and persecutions as well as fancied ones.

To be able to offer the best advice in that unhappy state of mind full of fear and anxieties and disgusts, which not unfrequently ends in melancholia, the physician should have something of the philosopher about him. It is scornfully said philosophy cannot even cure the toothache; but then it does not pretend to do so. On the other hand medicine can. The Stoics founded a school which built up many a strong character. Their maxim

was to face evils boldly, when their power to hurt would be found to be small. "*Tu ne cede malis sed contra audentior ito.*"

The fault of these ancient philosophers was that they looked to reason alone. The fault of modern physicians is that they look to bodily influences alone; he who combines the two doubles his strength. Many of the griefs with which men torment themselves are in great part imaginary and can be wiped away by the exercise of reason. The pangs of empty vanity, the sores of wounded pride, the secret stings of envy and jealousy, the shiverings of bitter hate, fears for what never happens, or for what could never happen, the cravings of disappointed greediness, and vain desires for what could not be enjoyed make a fearful contribution to the tale of human miseries, and much of these a well-regulated mind may escape. On the other hand you lose time trying to administer purely rational consolation to a man whose melancholy is founded on dyspepsia or disease of the liver. A bad state of bodily health may make a man fall into mental disorder; but then an ill-regulated mind may make a man fall into a bad state of bodily health. A man may fall into melancholy through indigestion; but through discontent he may fall into dyspepsia. People prone to melancholy should be taught not to keep up grumbling, which only accentuates real suffering. Better is the stern mood of Dante ("Inferno," xxxiii, 49): "*I' non piangeva: si dentro impietrai.*" I did not complain, so I became like stone within.

The physician should be ready to give useful advice if he be consulted either by the person in question or by his guardians as to what measures should be adopted to avert the danger of mental derangement. As a general rule such a person should lead a natural and simple life, live in the country, be much in the open air and avoid mental strain and anxiety. It is easy to make such sweeping prohibitions, but often difficult to act up to them. Where is the position that has not its trials?

To secure a man an unruffled life is a problem too difficult to work out. From what I have seen of the world the position of a man in moderate circumstances, cultivating his own land, is about the freest from care. The diversified occupations of agriculture are naturally interesting. The anxieties about the weather and the failure of crops, or diseases in stock do not perturb men's minds so much as the worries and losses of merchants and speculators, who are ever trying to balance themselves on other people's shoulders. A situation in a bank or an insurance company gives regular employment and ease of mind without undue strain of work. The situations in the civil service in Britain are well paid, and give easy work free from anxiety, with a pension when age approaches; but now-a-days, in order to get admission to them, one has to go through a competitive examination with its severe strain and possible disappointment. As a rule artisans and laborers are not subjected to as much mental anxiety as the middle classes. They do not suffer nearly so much from the fear of want as one might imagine, and their occupations, taxing the muscular rather than the nervous system, is not favorable to extreme sensibility. Their work gives them a good appetite and enables them to sleep well. The worst strain they have is the occasional necessity of looking out for employment, and the suffering of actual want and hunger. The physician must consider each case, and not offer advice which, however, good as a general axiom, is impracticable under the circumstances. It is easy to say, "Furl your sails in a high wind," but to tell how much sail one can prudently carry requires some knowledge and nautical skill. There are strains which affect persons in divers ways, and it is better to warn them against these special weaknesses than to say, "You must avoid *all* strain whatever." Occasionally hardships are salutary, acting as derivative consolations, and a very quiet and even life is to some people so tedious that it now and then drives them to commit suicide.

Physicians are occasionally consulted by people of a recognized neurotic tendency, or who have suffered from temporary insanity, whether they should marry or not. For my part I should be sorry to advise such persons to marry, and should be disposed to dissuade anyone from entering into partnership with them; but when such men take it into their heads to marry they will not heed contrary advice, and if at all well-to-do, they always succeed in getting some woman to marry them. A German physician has given as the result of his experience, that of the women who left his asylum a considerably smaller proportion of those who afterwards got married had relapses of insanity. Hence he considers marriage, at least in women, to be a prophylaxis. One might think it would be difficult for discharged patients to secure husbands; but it is possible the natural ardor which women show in this pursuit would be reinforced by the desire of escaping insanity. To such ladies I should respectfully suggest that they should captivate strong country fellows with a fondness for open air pursuits. If after having effected their object they feel any compunction, they might pay some attention in the bringing up of what children they might have to such precautions as we have tried to indicate.

In general people find what they look for. If you look for straight lines in nature, you will see them; if you look for crooked lines, you will see them too. The cultivation of a fine taste means increasing the capacity for enjoying the beauty of the world.

Happy is he who can say with David Hume, "I was ever more disposed to see the favorable than the unfavorable side of things; a turn of mind which is more happy to possess, than to be born to an estate of ten thousand a year." Cheerfulness is, to a certain extent, an inborn quality; but it may be strengthened by cultivating a proper attitude of the mind, as discontent may be nursed by indulgence into a chronic condition. No man's conduct and thoughts

were more under the rule of the reasoning faculty than Hume's.

Sad thoughts strike the mind most painfully in the morning. Hence those who wish to escape from them should rise whenever they awake, dress themselves, and take to some occupation. It is better for a man so troubled to light his own fire than to lie awake for half an hour brooding over his unquiet thoughts.

The will, like the other human faculties, is capable of being strengthened by exercise and of being led into exercise by mental and physical arrangements. By inuring themselves to overcome obstacles and resist temptation men prepare themselves for great resolves and great fortitude. On the other hand, by falling into a habit of shrinking from what is unpleasant and what seems dangerous, men fall into a narrow circle of thought and action. Most men must have had some experience of the agonies of irresolution—how one course of action seems preferable at one time and another a short time after. Though it may happen that after having decided the rejected course seems again to be the better one, nevertheless it is true that the best way of fixing the decision is to put it in action. To make one feel sure of a thing the best way is to act upon it, and not to ponder too much over it. Laplace, in his essay, "Sur les Probabilités," quotes the observation of Pascal, addressed to those who wish to have done with doubts on the existence of God, and to obtain a confident religious faith. "Learn," says the Christian philosopher, "from those who have been such as you, and who are cured of an evil from which you wish to be cured; follow the manner by which they have begun; imitate their outward actions if you cannot as yet enter into their inward disposition; quit these vain amusements which wholly occupy you." "I should have speedily given up these pleasures," you say "if I had faith;" but I tell you that "you would soon have faith if you would quit these pleasures. Do not misunderstand yourself. We are

both body and soul, whence it comes that the instrument through which the persuasion is made is not the only demonstration. How few things are really demonstrated? Proofs only convince the mind; custom reinforces our proofs; it inclines the senses which influence the mind without us thinking of it." Laplace, who was not anxious to follow Pascal's advice in this particular, remarks that it may be adopted with success to destroy prejudices received from infancy and rooted in habit. The frequent repetition of actions contrary to these prejudices, in the course of time, weakens them and makes them entirely disappear. Laplace thus states what he calls a principle of intellectual physiology; if one frequently executes actions which result from a particular modification of the interior organ, their reaction upon that organ may not only increase this modification, but sometimes give rise to it.

In a pamphlet published fifty years ago, "On Man's Power over Himself to Prevent or Control Insanity," by the Rev. John Barlow, the necessity of cultivating self-control is wisely insisted upon. The author says:

> If there be no disease the self-control thus begun will gradually eradicate the depraved inclination. This cure for insanity was known long ago. Celsus recommends committing things to memory, and every-one who has given a rational attention to the subject has been earnest in recommending application to some study which should occupy the mind without agitating the feelings, as one of the most effectual modes of counteracting morbid impressions.

It will be here asked what study would be most serviceable in accomplishing this object? Mr. Barlow observes:

> Whoever will converse with lunatics will soon be satisfied that a very small portion of them consists of persons whose talents have been regularly and judiciously cultivated, for those who most exercise the faculties of their minds are least liable to insanity, and nothing is rarer than to find a mad mathematician; for, as no study demands more attention than mathematics, so it secures the student during a great part of his time, from the recurrence of feelings which are always the most impervious in those who are the least occupied.

We believe the general principle to be correct that persons accustomed to mental cultivation and discipline have great advantages in escaping from morbid mental action. Unhappily they do not always do so. We have no statistics to tell us in what proportion insanity affects mathematicians; but they do not wholly escape. Auguste Comte* is a notable example. We should, however, judge mathematics to be a healthy exercise for the mind. In insanity the faculty for arithmetic is often well preserved. We do not know whether this holds good of geometry. As Bacon says:

> If a man's wits be wandering let him study the mathematics; for in demonstrations, if his wit be called away ever so little, he must begin again.

But the great majority of men have no taste, rather a decided distaste for this study, and scarcely anyone pursues it alone unless under some powerful motive. The learning of a new language has been found by experience to engage the mind without fatiguing or harassing it: the study can be easily taken up or put down and forms a whole which is easily divided into parts. The study of animated nature, zoology and botany, with its illimitable fields and its cultivation of the perceptive and reflective faculties alike, and the occasion it gives for outdoor exercise, is a valuable method of diversion for a mind unhinged or liable to become so.

Though it may seem too formal, experience has led led me to think that certain rules and methods laid down for regular times for pursuing studies and keeping the mind occupied, are often useful. In this way one may draw lessons from the exercises used by the Catholic Church, especially those of the regular clergy. The

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* Auguste Comte was under the care of Esquirol for above seven months (1826), without any benefit. As this celebrated physician held out no hopes of his recovery, Madame Comte removed her husband to her own residence. This was not without risk, as he was both violent and suicidal. Esquirol continued to give medical advice. In all probability Comte's recovery was due to the assiduous care and devotion of his wife. She was convinced that no treatment could succeed, if at the outset one did not understand the character of M. Comte. See "*Auguste Comte et la Philosophie Positive par E Littre*," Chap. vii. Paris, 1884.

exercises prescribed by Ignatius Loyola are worthy of attention. The object of the founder of the Jesuits was to make a vivid and intense impression upon the mind, to draw the thoughts into particular channels, and to keep the attention from straying, and the result proved that he had a deep knowledge of human nature.

But we must not forget that all men are not studious. The great majority of men rather prefer some pursuit which brings them in direct contact and dealing with the outer world. He who wishes to escape the morbid current of his thoughts and fears should select some one pursuit and involve himself in action concerning it, under the confident expectation that his interest in the subject will increase. *L'appetit vient en mangeant.*

Of all such occupations known to us, gardening is the most wholesome and engrossing. As Bacon says:

> It is the purest of human pleasures and the greatest refreshment to the spirits of man.

Gardening gives exercise to body and mind alike, and though mainly an out-of door pursuit, it also gives some employment under cover.

We may here consider what medical treatment should be adopted when the danger of insanity is imminent as indicated by such symptoms as persistent fixed ideas threatening to pass into actions, morbid sensitiveness, continued alarms and anxieties, and sleepless nights. In the state of neurasthenia, which is often the basis of all these symptoms, medical men should try by all means to restore tone to the system. Hydropathic treatment, sea bathing, cold baths and rubbing are often beneficial. The application of the continued current, or general faradisation of the trunk, may be of benefit. It is held that faradisation of the extremities diminishes the amount of blood in the brain. Where medicinal tonics are indicated the best to use are quinine, arsenic and the phosphates. Anæmia should be treated with iron. Where there are

hysterical symptoms Krafft-Ebing* recommends valerianate of zinc and bromide of zinc. Where the ideas are of a homicidal or suicidal nature has found benefit from preparations of zinc and opium.

One noteworthy difference between the alienist physicians of France and Germany and those of Great Britain is that the former lay much stress upon opium or morphia, and give it in large doses, whereas most of the English physicians seem to have a distrust of opium, and in trying to subdue the sleeplessness which often ushers in insanity prefer hypnotics such as chloral and sulphonal. It seems to me a feeble objection to say that opium is liable to injure the appetite and constipate the bowels. If good can be derived from opium or its preparations, there are resources in medicine to obviate this drawback. At present there seems a great want of nerve in the medical profession. They seem willing to give up opium, mercury, antimony and blood-letting, because in past times these powerful remedies have been indiscreetly and indiscriminately used. The physician ought to know in what cases these are the best remedies, and not to be scared from using them when they promise to be of service, by the fear of remote consequences, which may be successfully avoided. It is an error to imagine that the hypnotics recently brought into notice are exempt from bad consequences. Sometimes the physician who uses them is startled by results of which he had not been sufficiently warned by those anxious to introduce them.

At the same time the use of medicinal hypnotics should not be had recourse to until natural means have been exhausted. Sometimes sleep may be brought on by bathing the hands and feet in cold water. In some cases the use of beer at night, or of lettuce, will assist somnolence, and bromide of potassium is a calmative which may be tried before more powerful drugs, such as

* Ueber Zwangsvorstellungen bei Nervenkranken von Professor Krafft-Ebing, Wien, 1884.

opium, hyoscyamus or sulphonal. Of late years paraldehyde has been much recommended in neuropathic affections.

Some well-known French physicians have brought prominently forward the use of hypnotic suggestion to overcome sleeplessness, and to combat fixed ideas, such as agoraphobia and claustrophobia.* They have also employed this method to insinuate cheerful ideas and good resolutions, in order to displace melancholy notions and resistant moods. As far as my information goes it does not seem that hypnotism furnishes a steady resource to therapeutics; but there are cases of occasional success, which show it to be a method of treatment of great utility.

Occasionally a particular remedy turns out of much avail. The following is an instance:

An old military officer, after retiring from the service was induced to invest his savings of an honorable and frugal life in a factory. The man who led him into this undertaking decamped, leaving him to pay all creditors, so that the old officer lost everything but his pension. The idea that he had thus thrown away what he intended should be a provision for his family haunted him night and day. His distress was carried so far that it threatened to overpass the bounds of sanity. He was afflicted with dreadful headaches, accompanied with aggravated depression of spirits. He consulted several physicians; but their drowsy tinctures gave him no lasting relief. Thinking that there was some cerebral congestion, I recommended large blisters on the scalp. From this treatment he derived so much benefit that he blistered his head about twenty times. The hair began again to grow on his bald crown; in the end his headache left him and his spirits improved. His intellectual powers slowly diminished; but he was already an aged man. He died from an accidental injury.

When the mental derangement is so pronounced that the patient requires to go under direct medical care, or

* See "Un Cas de Claustrophobie gueri par la Suggestion Hypnotique par le Docteur Gorodichze." *Revue de l'Hypnotisme, Aout*, 1893.

to be sent to an asylum, the patients are generally incapable of such exertions as would conduce to their recovery. It is no use trying to argue them out of their delusions, and it is often unwise to lead conversation towards them. It is generally better to lead the mind off from their besetting ideas and conduct it into new channels of occupation or amusement; but occasionally reasoning with them or presenting new ideas is of advantage, and this is especially the case when recovery has commenced. The medical attendant may then take occasion to point out that their grievances or delusions or fears, and their dreadful sense of sin or fears of damnation, which haunt them, are but symptoms of perverted function of the brain.

The Rev. Mr. Barlow* quotes from Dr. Conolly an instance of the power of the will in suppressing the manifestations of insanity:

> In the Glasgow Lunatic Asylum, a patient afflicted with religious melancholy had made up his mind to destroy himself, but that a short passage from the Scriptures impressively and kindly spoken to him, not only prevented the commission of suicide at the time, but had the effect of permanently checking the tendency to it. The same dreadful thoughts frequently returned to the patient's mind, but the recollection that "no murderer hath eternal life," returned also, and crime was refrained from. This man then had the power to restrain himself; yet had those words never been spoken, and had he committed suicide, he would have been held insane and incapable of doing otherwise.

A noteworthy example of the power of decision of character and trained intellect to help a man to get free from the visitation of insanity is presented by the life of Dr. Victor Kandinsky. Descended from a family of wealthy Siberian merchants, who through some unlucky undertakings had been plunged into poverty, he was compelled at an early age to struggle with difficulties and hardships in order to be able to carry through his studies in the University of Moscow, where he graduated in 1872. A surgeon in the Russian navy, he served in the Black Sea during the Turkish war of 1877–8. From

* Op. Cit., page 45.

the fatigues and privations he then suffered, and probably from hereditary tendency, he became insane and was in an asylum for two years. In a paper in the *Archiv. für Psychiatrie*,* Kandinsky portrays with a wonderful blending of vivid description and analytical skill the hallucinations and delusions that beset him. His recovery seems largely due to his earnest and pertinacious struggles with his morbid sensations and thoughts. He observes thus:

> Without energetic exertion of the will, my hallucinations would probably have become permanent, and my mental powers totally extinguished; but after I had become accustomed to the hallucinations, I began steadily to read. At first it was difficult, for the hallucinations of hearing disturbed me, and those of sight stood between the book and the eyes, but in time I succeeded in continuing my reading without paying any heed to the hallucinations. With the beginning of a regular mental activity, the hallucinations became paler and less frequent, and disappeared entirely some months later after I had begun to work.

After Kandinsky's recovery he devoted himself to the study of psychiatry, and wrote some treatises which show great knowledge and originality. In 1881, he became a supernumerary assistant at the Asylum of St. Nicholas at St. Petersburg, and in 1885 he gained by competition the place of Senior Superintendent (Ordinator). A man of kind and feeling heart, Kandinsky labored with unflagging diligence to soften the lot of those suffering from the malady from which he had made so memorable an escape; but his useful career was broken by a premature death in the year 1890, in the fortieth year of his age.

The influence of scholastic instruction with gymnastic drill has been found of benefit in the treatment of insanity, and would probably be more utilized were it not for the great exertion it must call for on the part of superintendents whose time is occupied with widely different matters. It is of great importance that the superintendent of an asylum should be a man of versatile mental power and wide knowledge. Fortunately for this

* XI Band, 2 Heft.

we need not go beyond the medical profession. As Goethe observed of the study of medicine:

> The subjects with which it deals are at once the most open to the senses and the highest, the simplest, and the most complicated. Medicine occupies the whole man, because it occupies itself with the whole man.

In pursuing such indications of treatment much of our hopes of improvement lies. But so little is this understood in Great Britain that in those asylums which are kept under lay superintendents, those appointed are generally men of little education, selected for their acquaintance with the purveying of furnishings and provisions, or for experience gained in managing a poorhouse. *Nimium ne crede colori* is a maxim little applied to our lunatic asylums.

In many British asylums considerable efforts are made to have some employment for the patients; but the work is mostly of a very simple character. In using education as a means of treatment Ireland has taken the lead. The late Dr. Lalor had a regular system of education for his patients at the Richmond Asylum at Dublin. He took great trouble to have good teachers; the classes were conducted with spirit and ability, and the results were often gratifying. I have been told that the same system of classes is still continued by his successor Dr. Conolly Norman. I witnessed gymnastic drill successfully conducted at the Londonderry Asylum, presided over by Dr. Stewart. At the Mullingar District Asylum Dr. Finnigan pays great attention to the teaching of scientific dress making, tent making and other employments involving intelligence.

It is likely that these results will be found to be the best amongst people in whom primary education had been neglected, as used to be the case in Ireland.

A few considerations induce us to think that the presence or the absence of desires and efforts on the part of the lunatics to escape from their mental derangement may be followed by appreciable results. We hear much of the cruelty, neglect and bad treatment of

patients in the old asylums, and there is no doubt that their condition was often most miserable; but after introducing so many improvements, comforts and luxuries, it is disappointing to find that if we take as a test of success in treatment the average rate of recovery, the old physicians in charge of the insane had very much the advantage. Several explanations have been given to account for this untoward fact, containing more or less of truth, but none of them quite satisfactory. I am inclined to think that the very misery and discomfort of these old asylums had a tendency to increase the efforts and desires of some of the patients to get out of these dreary abodes. A similar view has been definitely stated by Dr. Mortimer Granville* after a careful review of the English asylums.

My friend, the late Dr. Frederick Skae, who went out to New Zealand to become inspector of asylums and hospitals, found that the condition of lunatics in that colony was most uncomfortable, and yet their recovery rate was higher than in Great Britain. In Britain the pauper lunatic leaves his poor damp cottage for a well-built, well-aired, well-heated dormitory; he has warm and clean clothes, and many comforts to which he was never accustomed, and he is fed in a manner that he never enjoyed before. These lunatics often over-eat themselves. The dining-halls of District Asylums afford grand opportunities to the pauper glutton, who in addition to his own

* I would again urge that although the insane generally are spared much grievous and wanton suffering by the abolition of restraints, they have less chance of being cured under a system which not only spares needless irritation, but affords great and grave facilities for what a Scotch commissioner has characterized as "drifting pleasantly into dementia." When the excited maniac was encased in a strait waistcoat, he raged and played the madman to the full, but the moment his fury ceased, his bonds were generally removed. This change of treatment produced a mental effect, which, if it came into play at the right moment, gave an impetus to his recovery which carried the case over the dead point and sped its cure. All that this advantage may have been worth is lost to the patient under the present system, and although I am well assured no sensible man would wish to revive the old practice for the sake of any collateral good that may have grown out of the evil, it is a grave question whether the mild and uniform method now adopted does not require a measure of watchfulness and personal attention to individual cases which has never been accorded, and is in fact impossible in the colossal establishments to which the modern treatment of insanity has given rise.—"The Care and Cure of the Insane," by J. Mortimer Granville, M. D. London, 1877, Vol. II., page 222.

share occasionally makes inroads upon the messes of his melancholic or demented neighbors, hence there is coming into being a class of patients who have no desire to recover because they do not wish to leave the asylum. There are men or women getting lazy, stiff, or old, who have a fear of being turned out again into the bleak world to seek for the meanest and hardest toil at the hiring markets. It is not therefore surprising that there are persons in these asylums who rather try to suppress than to welcome symptoms of recovery, and that when turned out they manœuver to get in again. I know that several sagacious medical superintendents are quite aware of the existence of such a class and the difficulty of dealing with them. Naturally they have a compassion for those who have had the misfortune to become insane, and do not like even a suspicion of the desire to treat them hardly. Moreover the situation of these officials renders them fearful of broaching any ideas which might be used for foolish purposes by cheese-paring and meddlesome directors. In establishments for the wealthier classes such cases are much less frequent, but I have known instances in which patients, who had been long in an asylum, and had been accustomed to its lazy life and passive amusements, when told that they were recovered, and might now leave, showed a pronounced desire to remain. I have heard medical superintendents of great knowledge boldly affirm that many of the insane are quite happy. My own experience has not led me to take this view. At any rate such happiness or quiescence must be of a low quality, as Aristotle well defines it, "Happiness is virtuous energy," and this will hardly be found with a patient content to remain under lunacy certificate. There is a tendency in asylums to enfeeble the will-power. Where uneasiness is absent there is too little effort to escape into a healthier condition. As Locke puts it,

> The *greater good*, though apprehended and acknowledged to be so, does not determine the *will*, until our desire, raised proportionally to it, makes us *uneasy* in the want of it.

Neuratrophia, Neurasthenia and Neuriatria.*

FIRST PAPER.

By C. H. Hughes, M. D., St. Louis, Mo.

WHEN Beard, but a few years ago, first broached the subject of nervous exhaustion as a distinctive and definitive condition of the nervous system without accompanying or precedent localized organic lesion or hæmic disease, he was regarded by many as a visionary theorist, if not as a crank, and when Van Deusen, that Kalamazoo physician, who preceded Beard in the presentation of this subject, offered his first contribution to the profession through the pages of a standard medical periodical (*The American Journal of Insanity*, 1887), he was scarcely given a hearing by the leaders and molders of medical opinion, and Dunglison had carried the unused and unnoticed term in his standard American Medical Dictionary for some years before these live observers vitalized it and rescued it from the fate of so many good terms now epitaphed as obsolete.

Now the term "Neurasthenia," and its explanatory phrase, nervous exhaustion, though not half a century old is in every mouth, medical and non-medical, a substitute for more accurate diagnosis and a satisfactory explanation for conditions whose prime cause is often elsewhere than in the nervous system. So that while neurasthenia is a real condition, it is in danger of becoming a fad with physicians and a convenient substitute for accurate diagnoses.

This term has been used to designate the debility of anæmia and chlorosis, the exhaustion of marasmus,

* Read before the St. Louis Medical Society, February, 1894.

toxhæmia and the post-febrile *sequelæ*, as well as the debility of enteric phthisis, and the neural perversions of hysteria and neuro-venereal nervous debility. In this broadened sense it is an exceedingly vague term. Applied so indefinitely and without discriminating significance, it means nothing but general weakness; whereas, to the neurologist, it has a far more definite and significant meaning.

The neurasthenia of neurology is a condition of the nervous system *sui generis*. It is not necessarily a sequence of organic disorder or of chemical or microbic toxicity or of poison or starvation of the blood from any cause. It is not a blood disease. It is a neural debility dependent upon an inherent factor and inadequate central nerve-cell power of appropriation and instability of expression. The instability is due to central debility, and the debility is due to neuratrophia consequent upon overtax and the hereditary factor, by which assimilation and elaboration of force is not equal to expenditure. The equilibrium between central nerve repair and waste or disintegration incidental to action or organic function is disturbed and the balance is against the functional integrity of the central nervous system. This may take place when the blood is rich in reconstructive elements, so that while depravity of blood may bring out the unstable displays and develop the undertone of nervous exhaustion in the predisposed, it usually takes place from pure prolonged or intense overtax of cerebral and cerebro-spinal centers from great and continuous mental or physical strain or shock, and the physical conditions, the atony of organs, the apepsia or dyspepsia nervosa, the hepatic and intestinal torpor, the cardiac debility and irregularity, and all the train of psychical symptoms—morbid irresolution and timidity, the dreads, the fears, the sensory perversions, the anæsthesias and hyperæsthesias, the analgesias and hyperalgesias, the flushings and vertigoes, the claustrophobias, mysophobias, phobophobias, morbiphobias, heterophobias, etc., etc., as well as the more defined intellectual and

emotional perversions of its later stages, delusive and imperative conceptions, perceptions and feelings and sometimes morbid impulses, are the outcome of the cerebrasthenia profoundly affecting the cortex, and associately, the region of the medullæ and pons. If we follow the nerve channels of conduction of motor influence down from the psychomotor areas of the cortex through the corpus striatum to their outward peripheral, and the sensory fibers through the thalamus opticus to their inward central expression, and if we search in the *iter a tertio ad quartum ventriculum*, and in the walls of the fourth ventricle among the cranial nerve nuclei there, we should find, figurately speaking, in these centers of afferent and efferent nerve cerebral impression, as well as in the trophic centers of the brain and cord and in the cerebellar, cerebral and spinal connections of the pons, an explanation of conditions that do not necessitate precedent functional or organic disease in certain organs to account for neurasthenia. On the contrary, the neurasthenia and its underlying central neuratrophia accounts in numberless instances for the complications in the viscera. But the general practitioner has been, hitherto, so accustomed to locate disease in organs and, fastening upon a certain organ, now the liver, now the kidney, now the stomach (and always the ovary, if his patient be a woman, and her physician one of that narrow kind of gynecologists now happily passing away, generally the kidneys, if a man and his physician a nephrectomist), and treating it to the exclusion of the nervous system, that it has become the popular custom (and popular custom follows professional, a little way off) to charge the troubles of the neurasthenic to the organ or organs that most prominently reveal disordered feeling, as the hypochondriac does.

The body social and political is just now asking what shall be done with the moral cranks of society, but what are we to do with those hypochondriacal cranks in our profession, whose fatal fad it is to load all the ailments of the physical body, including those within the realms

of psychiatry, on some one organ, and that one, the particular organ or group of organs which they especially treat, and, finally finding themselves unsuccessful in their therapy, as must necessarily be with all such narrow-gauge and limited visual range practitioners, become skeptics in regard to the value of medicine in the treatment of disease in general, and by advising their patients to do without medicines simply because they, by narrow or mistaken diagnosis, have been unsuccessful, they harm the public (by such advice), because by wrong counsel they rob the patient of available resources in the hands of the more skillful. What, for instance, must happen to such of the public as, finding themselves suffering from vasomotor failure and a certain sequent turgescence of the nasal mucous membrane, are prompted to seek the narrow nose specialist who sees only follicular rhinitis in such cases and not the lowered, underlying and causative nerve-tone. The unfortunate patient gets his nose douched regularly every spring and fall, until finally the rhinologist, becoming tired of treating the same patient so long, or of having his other patients see the same patient every season in his office, tells him there is no cure, or the only cure is in the sea-shore, change of climate or travel, when a proper treatment of the patient, including his nose or even excluding it, would have effected a cure in a season; or *vice versa*, suppose a patient having a neuralgia or nerve pain from tumor, an abscess or pressure or other morbid surgical cause in its center or course is treated by an equally narrow neurologist for a disease of the nervous system? Adneural disease is often thus misinterpreted even by the neurologist who should know better. The nose, the nerves, the heart, the ovaries, the kidneys, the bladder, the bowels, the lungs, the liver and the stomach are often treated in this way, because they are found to be the seats of pain, irritation and disordered function. I have known a patient to escape the loss of a kidney at the hands of the surgeon who proposed nephrectomy for obstinate renal neuralgia, and number-

less instances are on record and many within my own observation of simple neuropathic women who have escaped oöphorectomy to have their irritable ovaries finally entirely relieved by judicious constitutional treatment addressed to the hyperæsthetic and weakened sensory and vasomotor system and by a general constitutional repair. Others have not been so fortunate, some having had both ovaries removed, yet the neural disturbance continued, and some have passed neurasthenia and oöphorectomy into the painful sequel of insanity.

Nearly all dyspepsias are due to brain-strain and impaired or defective vagus innervation. In short it is primarily a brain trouble in the vast majority of dispeptics, as Amariah Brigham, a distinguished American physician, as long ago as 1832, first pointed out. The most of the symptoms of cholera, the draining off of the blood serum in rice-water discharges, the cramps, the collapse, are all disorders of the nervous system, and the now prevailing *grippe* is a toxic neurosis; and is not that indefatigable worker in dermatology, Ohmann-Dusmenil, our colleague, every now and then finding a new nervous disease of the skin, until neural dermatology or dermatological neurology has almost become a special department of medical work. And what would Love, of acknowledged success with children, amount to if he ignored their delicate nervous systems in the treatment of their many maladies which are so largely nervous?

Though it has been but a short time since I introduced into the nomenclature of medicine the terms neuratrophia and neuriatria, their meaning and importance in general practice even are becoming quite well understood. The new Century Dictionary has adopted them, and the profession, even in general medicine, has given them practical significance by recognizing the importance of recognizing the neural factor in the management of diseases in general, whether disease primarily, secondarily or concomitantly involves the nervous system. The general practitioner must be a neurologist to achieve the

highest success in practice, and the best success of a neurologist depends upon his knowledge of general medicine and the wide range of his general clinical experience, and *vice versa*, always. A specialist may limit himself to one line of work, but not to one line of research, for his *patient* is ill as well as the *part* of perverted physiological system he treats, and whatever part he treats he should remember that,

> All are but parts of one great whole,
> Whose life the blood is and the nerves the soul.

The physician who does not study and treat his patient all over, or who is not competent to advise his patient how and where to remedy all his maladies, is apt to be a no bigger man in his practice than the little fellow in naso-pharyngology who knows only how to douche the nose and throat, or of those other little fellows, the narrow otologists and ophthalmologists, the range of whose practical skill extends but little further than a few collyria and the plucking out of ingrown hairs or of touching the region of the tympanum and inflating the Eustachean tube. The true specialist of nose or eye or ear, studies and treats from a broader stand-point. In short, he is a physician, as should be the neurologist.

Gentlemen, we have reached a period in the evolution of medicine where there is no place for the little neurasthenic doctor with dudish ways, either in the specialties or in general practice. We have reached a period when a man should know his whole profession, no matter in what department or division of labor he works. We have reached a point where we are more dependent upon each other than ever before for mutual advice and counsel.

Sir Oracle of the past in our ranks, is dead. A confraternity of collaborators has taken his place. We are all neurologists. We are all general physicians, at least in the stu dy of the phenomena and relationships of dis-

ease, though the field must be worked over by special workmen. We call them specialists because of the limited range of their respective labors, it being impossible for one man to practice over the whole field. In this sense and under this view, I propose to tell you how I treat essential nervous exhaustion or neurasthenia, and, while not ignoring other of nature's aids, I do not despise the assistance or undervalue the potency of medicines in promoting recovery from this peculiarly American disease of the counting-house, the pulpit, the rostrum and the exchange.

General neuratrophia or its functional expression neurasthenia is a disease of the overworked brain and overtasked allied nervous system. It is the disease which first overtakes the man of extensive business affairs and cares who egotistically regards his brain and connected nervous system as a perpetual motion machine not governed by the ordinary laws of supply and demand of nerve force, of waste and repair of energy; of the man who stimulates and goads when he ought to sleep, who prods the tired animal to desperate efforts when, under overtaxed nature's demand for rest, it lags in effort; of the man who not only expends the principal of his stored up nerve energy by drawing out all the reserve and exhausts the interest, and being unprepared for the unexpected bankruptcy finds himself involved in business affairs he no longer has the strength to satisfactorily conduct. The successful lawyer, the great jurist, the popular actor, the talented preacher, the successful politician, the skilled and publicly appreciated physician, the brilliant writer (sometimes he is an editor), the artist, the architect, the zealous tradesman, ambitious politician,—all and every one in every rank of life who runs for life's prizes without heeding the physiological warning on the wall, treat themselves in the same suicidal way as if there were for them no physiological reckoning, no pathological hereafter.

It is fortunate for many of these that, by reason of

inherent tendency to neuropathic instability, acquired ancestral overstrain transmitted, they let down in neuratrophia, giving out in neural functioning power, rather than in the graver forms of nerve failure, like the paralyses, apoplexias, the pareses and scleroses.

These ambition-crazed cranks (I use the term in its milder sense) have turned at the wheel of progress, personal or public, until their own machinery goes wrong, unmindful of the law in physiology as in physics, that rest, as well as action, is essential to repair, and that, as in the machinery of man's own contrivance, its movements must be stopped at times in order to keep it properly reconstructed and serviceable.

Though books have been written on the subject, the causes of neuratrophia and its consequent neurasthenia, under the designation of neurasthenia only, need not be more definitely enumerated. They are overwork, wear and worry of the brain and the symptoms, especially the dyspepsia in men and the utero-ovarian and spinal irritation in women, which have been so often treated as its causes or its consequences. I have seen patients unsexed and their backs burnt with white heat whose sole trouble was nervous exhaustion and associated spinal or ovarian irritation, and equally inappropriate treatment and vicious diagnosis, as for organic disease, has been often applied to the irritable hearts of these very unfortunate patients; and as for the hysterics, what contumely, suspicion and lack of sympathy have they suffered at our hands for conditions of irritability they could no more control unaided than could the epileptic restrain his spasm.

It is apparent to every careful observer that neuratrophia or neurasthenia is both a primary and secondary condition and that its accession under conditions of over brain-strain, adverse stress of the emotions, as in great grief or overmastering sorrow or as a sequence to the devitalizing organic or circulatory diseases, must be carefully differentiated in order to accomplish its successful treatment, and

in my judgment and experience, it is always amenable to cure, if the physician can get at all the determining factors and have entire control of the patient's environment and treatment. I think I have never failed under these circumstances and that, too, largely with very great assistance from suitable medication, including the use of electricity, massage and passive exercise. I do not believe in the employment of hypnotism in these, as this always involves a cultivated perversion of the individual's normal will which, in my judgment, should seldom be systematically employed in any disease, and when it is deemed proper to employ it, it should be done after due deliberation and for the very best reasons only.

Hypnotism is somnavolism, and somnavolism is the absence or abeyance of the individual's normal will and subjection to the will of another through sleep psychically induced and not naturally induced. But sleep is the paramount remedy for neurasthenia, as it is for natural fatigue —prolonged, quiet, dreamless, tranquil, recuperating sleep, that restores the exhausted ganglion cells of the overtaxed cerebral cortex, as it "knits up the raveled sleeve of care"—and all the agencies, chemical, psychical, physical, moral, which may bring about the right kind of sleep in the right time, when nature inclines the human organism to rest, are indicated and desirable. The conditions of repair, as well as action, reside in organism, and nature's mechanism must rest in its defective parts, while that master mechanic the *vis medicatrix naturæ*, attends to its reparation.

Nature's workmen must have the materials for reconstruction at hand, and these are not all air and sunshine, but the things that the air and sunshine act upon to promote reconstruction and normal metabolism. The hematic reconstructives and those agencies which counteract the poisons of the blood which infect the neurasthenic as they do other patients and cause neurasthenia, are called for. Iron, quinine, strychnia and the iodides are often so obviously indicated that I need hardly mention

them to secure approbation of their use. The neurologist differs from the general practitioner in the employment of these agencies (at least, I do), by often employing them by means of electro-cataphoresis, because he has more time in his office to do so, as he does, or at least, as I do, in the more frequent employment of electricity. The emunctories need attention as in other diseases.

These patients need also, during their course of treatment, the tissue-building phosphites and the arsenicals and galvanism to promote cell appropriation and re-establish normal cell activity and tranquility in the affected centers of the cerebro-spinal axis.

There is danger of over-dosing these patients with the bromides because they quiet them, and of forming drug habits, especially morphiomania, because the latter makes the patient feel better at once. This is the practice of the tyro, the quack and the druggist.

The bromide of potassium should never be given to these patients. When bromide is used it should be either the ammonium, sodium or lithium salt. The proper bromides should be used sparingly, hæmatic reconstructives and nutrients freely enough for rebuilding, hypnotics only at night-time; and the idiosyncrasies and peculiar disease-tendencies, as to rheumatism, gout, neuralgia, local congestions, hepatic torpidity, constipation, etc., should be duly regarded and remedied. Thus to successfully conduct the neuriatry of neurasthenia, the neurologist should be a competent general practitioner and something more. He should have the special skill and facilities of a neurological practitioner for the graver cases. The general practitioner, if he is alert as he ought to be, can manage the minor case and the major too, perhaps, if he is willing to take the necessary time and patience to accomplish the task.

So, in conclusion, we have come to see, as the knowledge of the specialties diffuses in the profession, that the dictum of Cullen was not so far out of the way,

"that all disease is in a manner nervous;" and so I say the nervous system is more or less involved in all diseases, and in treating disease of the nervous system we should look for and remedy morbid implication throughout the body. In this sense, we are all neurologists: we are all general practitioners, though we may labor in special and limited fields.

Bilateral Paralysis of the Facial Nerve*

(Diplegia N. facialis).

By Dr. Monjoushko, Russia.

IT is known that one-sided, circumscribed softening of the brain can be expressed by one-sided paralysis of the face without affection of the extremities; even double-sided paralysis of the facial nerve may appear after one-sided affection of the large brain, as we see from the case published by Magnus and Romberg.

The diagnostic point, as given by Récamier, that the eyelids become only paralyzed in peripheric paralysis of the facial nerves, has lost its importance since Duplay has published a whole number of cases of central paralysis of the facial nerve, as proven by *post-mortems*. In the same way some morbid changes in the region of the pons varolii, can easily affect the beginning of both facial nerves, which lie here very near together. Similar cases are described by Wachsmuth, who relates them to glosso-pharyngeal paralysis of Duchenne. However, it is necessary to remark that the facts given by the author to sustain his view, appear as imperfect, as in two of his cases the paralysis was related only to the facial nerve, and no *post-mortems* were held, in the other two cases, although at the same time there was also an affection of the other nerves, which come out of the prolonged brain, but the *post-mortem* examination showed only a degeneration of these nerves.

The intracranial affections of the facial nerve are oftener the cause of a double-sided paralysis of the face than of the peripheric form. In most instances the cause of such a disease is a compression by growths at the base of the brain, exostosis apophysis basilaris, aneurisms,

* Translated from the Russian for the Alienist and Neurologist, by Dr. Gustavus Blech, St. Louis, Mo.

carcinomatous and tuberculous growths, exudations of the brain-cells, etc. Besides these mechanical causes, producing an atrophy of the facial nerves, Pierreson differentiates two more kinds, one of which reveals itself by inactivity (or paretic impairment?), and the other, he calls *atrophia spontanea*, affecting without a visible cause, one or several pairs of nerves, and producing besides the atrophy of the nerve elements, a hyperplasia of the uniting fibers, and an appearance of the corpora amylacea. In this latter category Pierreson classes the cases of Wachsmuth.

In 1867, Hueber published an interesting case of facial diplegiæ:

A widow, æt. 60, suffered a long time from neurasthenia and insomnia, and finally she observed that she could not shut her eyes. While trying to shut both eyes, they remained open; at the same time the nostrils and lips became immobile; the patient could not frown, laugh, smoke, etc. The pronunciation of the labial vowels was difficult. Dryness of the mouth; but she could swallow freely. The faradic reaction of the affected muscles appeared as diminished. After a few months a weakness of the right hand and left leg (whole) were added, and after another month a full paraplegia, weakness of the sphincters and difficulty in breathing appeared, and the patient died.

The autopsy did not show any changes, neither in the large brain nor in the prolonged, nor in the base of the brain; the intercranial facial nerve remained in its normal condition.

A case of double-sided paralysis of the face, published by Baerwinkel, in the same year, is interesting in so far that the cause of the paralysis, as supposed by the author, on one side was a central—but on the other side—a peripheric one. The foundation for this deduction formed the difference of electrical reaction of the affected muscles on both sides. In the beginning the patient, aged 68 years, felt (heard) a sound in the right and afterwards in the left ear; to this appeared a paralysis

of the right half of the face; the electrical reaction of its muscles, in the beginning somewhat weaker on the right side than on the left one, became less and less, together with the loss of voluntary mobility in spite of a continued faradization. Then appeared symptoms of a left-sided paralysis of the face; the patient complained of pain in the posterior part of the head. His walk became uncertain, and a double (seeing) vision appeared with an incomplete paralysis of the left adducting nerve. On the left side, where the electrical reaction was always normal, voluntary mobility reappeared without treatment. On the right side, the muscles did almost not react at all, on a faradic current, and then appeared pronounced, short contractions on a steady current. In the course of time the reaction to faradism became better, but lessened to galvanic current, but after ten and one-half months an almost complete cure was the result.

Interesting cases of double-sided paralysis of the facial nerve are also described by Steenèr, Nixon and Brieger. The first two authors, among other things, report also a contemporary affection of the sense of taste, and the last of loss of hearing.

Besides the central and peripheric causes of the double-sided paralysis of the face, which are regarded by us together, as they occur often together, follow as to frequency, morbid affections of the pyramidal parts of the temporal bones, and in most instances their traumatic injuries and syphilitic affections, and also double-sided inflammation of the middle ear. Such cases are described by Ketli, Seeligmüller, Wright and others.

Besides the mentioned causes, paralysis of the facial nerve may be produced also by neuritis and periostitis in lower part of the Fallopian canal; whereby it is not exactly necessary that they be of syphilitic origin, but may be due to influenza. Such kinds of paralysis develop on one, seldom on both sides, and exist without any functional disturbance of hearing, if the disease is

located below the n. stapedii, but with an affection of the taste, caused by dryness in the mouth as well as by a direct affection of the taste-cells, which are united, as it is known, to the facial nerve in g. geniculatum. Such cases (as *sequelæ* of polyneuritis) are described by Donnel, Eichhorst, Althaus and Strümpell.

The cause of a double-sided paralysis of the face can lie internal to the exit of the Fallopian canal or lower on the end branches of the facial nerve. There appears, generally, according to Pierreson, as the cause, cold, whereby the double-sided paralysis appears either at once, or oftener, in the beginning, on one, but after some time, on the other side. As another cause of a similar paralysis, the author considers the nerve degenerative atrophy of the ending branches of the nerves, and classes with this, Duchenne's paralysis of the tongue, of the lips and the gum, declaring it to be a progressive atrophy of the different cells of the seventh and twelfth pairs of nerves of the head.

It is furthermore necessary to consider syphilis and diphtheria as the causes of the affections of the peripheric branches of the facial nerves. Diphtheritis, according to Manigould, may produce double-sided paralysis of the face, in consequence of ascending neuritis, caused by the infected saliva, which is so often paralyzed in diphtheritis. Therefore it is astonishing that till to-day only one case of diplegia facialis, caused by diphtheria, is known.

We will speak later about syphilis as the cause of paralysis of the facial nerve. As far as cold is concerned in producing bilateral paralysis, it is more difficult to agree with it than with the many causes of rheumatic paralysis of the facial nerve.

We meet often with traumatic paralysis of the end branches of the facial nerves of both sides, as for instance, the labor-paralysis; but they are not worth special attention, for this reason, that they pass away without interference in several days or weeks, in proportion

to the injury done by the effusion of blood. But we meet also with serious cases of this kind, which may remain for a life-time. All similar kinds of paralysis of the facial nerve are caused by the pressure of the delivery-forceps on the body or branches of the facial nerve. Once Prof. Seeligmueller saw bilateral facial paralysis of an adult, with an evident scar of the forceps on both sides of the face.

As far as the development and course of the paralysis of the face is concerned, according to Pierreson, the disease seldom develops itself at once and at the same time on both sides, perhaps so only after traumatism; in all other cases, the paralytic symptoms can be observed in the beginning on one, and afterwards, after a more or less time, on the other side.

The continuity of the paralysis is very different. In the most favorable cases it can cease after an existence of several weeks, but may also exist during several months, and may even remain forever; in the last case it has a *sequelæ*, an atrophy of the affected muscles. The prognosis will depend upon the cause, which is to be found in the beginning of the disease.

When we speak of paralysis of the facial nerve, we, at this time, have in view only its paralysis, resulting from diseases of the centers of the brain (intercranial), and which is thought, together with other symptoms, to be an affection of that part of the nervous system where it is usually described, but the paralysis in consequence of an affection of the nerve-body, beginning at the nucleus, situated in the pons varolii, of course, is also related to its bilateral paralysis.

According to Gaj Kiewicz, the brain nerves usually affected from syphilis are, the eye turning, the optic, and more seldom the abducens, the smell, and finally the facial nerve. Paralysis of the sublingual nerve (hemiatrophia lingualis) has been observed altogether four times, and a neuritis Accessorii Willisii only once. In the condylomatous period of syphilis, beginning already from

the sixth week after infection, we meet oftener than anything paralysis of the facial nerve. Dargaud (1886), in his monograph: "On Paralysis of the Facial Nerve during Secondary Syphilis," collected eighteen cases of paralysis of the face; among which we see two cases of bilateral affection of the facial nerve.

In secondary syphilis most often the causes of paralysis of the facial nerve are meningitis of the base of the brain and periostitis of the Fallopian canal: Dargaud regards the compression of the nerve by an enlargement of the lymphatic glands of the neck as an exception. For instance, in thirteen cases of hard chancre of the tonsils, collected by Dr. Legendre, there was not one case of paralysis of the facial nerve, in spite of the considerable enlargement of the tonsils. Dargaud denies also a neuritis in a condylomatous period of syphilis, and therefore, according to his opinion, there hardly exists a syphilitic affection of the end branches of the facial nerve.

Just as easily as the lateral paralysis of the face can be diagnosed by even non-specialists, just as hard and difficult is to be understood the change of the face, bilaterally paralyzed; therefore such cases are not always classified where they belong to. The evidence of the disease by lateral paralysis, can easily be understood, through the difference of the affected side from the healthy one, "when the patient laughs or cries with one-half of his face"—but this very difference does not exist in bilateral paralysis.

Cases of diplegia facialis are so instructive and interesting, and on the other hand such patients are so unhappy, that we think it not useless to cite two cases of this very rare form, which we have observed after the opening of the Neurological Department in the Warsaw Military Hospital:

Case I.—K. M., soldier, æt. 25, entered the hospital March 12th, 1891. Patient reports that he started last month to speak badly; he cannot blow or whistle, neither kiss nor laugh; in order to drink he must turn back his

head or lie down; otherwise the fluid comes back from his mouth—he cannot spit and swallows down the collected lingual saliva; he cannot smoke, as he is unable to keep cigarettes with his lips; he does not breathe through the nose; in the same appears a dryness; the eyes do not shut and he sleeps in night-time with open eyes; it is hard for him to see long, the tears fill the eyes. His whole face has changed; it looks like a dead one, and remains as such. He hears with his ears as good as ever, but there is in them some constant and pretty strong noise. At the same time there appears dryness in the mouth; he cannot differentiate the taste of his food, and feels always a bad taste in his mouth. Otherwise he feels healthy.

His parents are alive and healthy. There is no family history of any mental or nervous disorder. Father drinks a little—the patient does not drink at all. On the 10th of December, he observed a pustule on his penis. Four weeks later there appeared also sores in the mouth. He was not exposed to cold, and there were no other diseases. Before the beginning of the present disease, he had headache, but there was no vertigo.

The patient is of little height, well nourished; morbid changes in his internal organs could not be found.

All signs of feeling on the trunk and on the extremities remained. The strength of the extremities is normal, their motion is free and well co-ordinated. The skin and dry tissue-reflexes are normal and equal on both sides. The reflex of the saliva remained.

The face is smooth; it has no expression, but if some expression could be found, it was rather an expression of surprise, which it never changes.

He can neither frown nor elevate the eyelids; the eyes are equally wide open; while trying to shut them, the lids do not move at all, but the eyeballs turn up; the lower eyelids are a little distant from the eyeballs; there are tears in the eyes; he respires through the nasal passages with difficulty and with a noise, as he cannot elevate the wings of the nose while inspiring; he can therefore not differentiate odors from a distance.

He cannot elevate the upper lip; it is always a little elevated and somewhat posted forward; the lower lip and the angles of the mouth droop; the latter do not move to the sides or in an upward direction, so that this dead face laughs or cries under the mask and expression of

surprise. He can neither open nor close his mouth; he cannot hold cigarettes in it; neither can he whistle or kiss. The fluid taken by him in the mouth partially flows back (to swallow it the patient must either lie down or bend his head backward). The patient eats by helping consistent food with his fingers. He can swallow freely. The patient's speech is unclear; he badly articulates words; he pronounces *p* and *c*, *w* and *f* badly; *a*, plainly; *o*, worse; *e*, fair and *u*, badly.

(*To be Continued.*)

The Criterion of Responsibility in Insanity.*

By H. C. Brainerd, Los Angeles, Cal.

THE criterion of responsibility usually held by our courts is the ability of the individual to discriminate between right and wrong in relation to the act in question, and absence of uncontrollable impulse impelling to the act. Such standard of responsibility seems inadequate to me, and I think its inadequacy is shown in attempting to apply it to the following cases:

A young man, J. H., whose father suicided, whose only sister was an imbecile, was several times an inmate of an asylum. His insanity each time was characterized by fixed and systematized delusions; *e. g.*, that pounded glass had been given him in his medicine; that poison had been given him in his food, which took all the mucous membrane off from his bowels, etc. He was always quiet, well-behaved and industrious in the asylum. Under asylum treatment, in a few months, his delusions would become less obtrusive and dominating and he would be allowed to return to his home, where free indulgence in whisky, tobacco and venery would soon cause a return of his delusions, and a consequent return to the asylum. During one of these visits home he developed the delusion that a neighbor was circulating stories derogatory to his character for virtue, and he determined to shoot him. Half a dozen times, he told me, he essayed to shoot him, but was restrained from so doing by the fear of injuring someone else at the same time. After a week or more of waiting, the opportunity came. The neighbor was sitting alone in his buggy when J—— walked up to him and emptied his revolver at him. He then coolly surrendered to the police, without any attempt at concealment of what he had done, but rather boasted of it. Fortunately his marksmanship was not of the best, and he did not

* Read before the International Congress of Jurisprudence.

succeed in putting his bullets where they greatly inconvenienced his neighbor. J—— was at once returned to the asylum to stay the remainder of his days.

I had many long talks with him about the matter, and learned that he knew, as well as anyone, that when he shot his neighbor he was doing an act prohibited by law, and that he would be arrested and tried for it, but relied on being cleared on the ground of justifiable homicide, claiming that he did it in self-defense, which he explained as defense of the attacks on his character. He would always wind up his defense by saying, "You would do the same thing yourself if he said those things about you."

He was notoriously dissolute, and he boasted so openly and so shamelessly of his vices, that his sensitiveness to these particular accusations would have been amusing if it had not been so tragic, and was at such entire variance with his whole character, that I believed it was due entirely to the dominating effect of his delusion and his imperative idea that he should shoot the man. He had the knowledge that his act was legally wrong. He had the ability to plan and the continuity of thought to execute those plans, and self-control to prevent his attempting their execution until he could do so without imperiling the lives of others than his victim. On the other hand, it is equally plain that the overt act was due to, and the direct result of, his insanity. The delusion being the motive for the assault.

Society may demand that such people be put where the lives of the community will not be endangered by them; but to punish them for the act arising from their insanity seems as inhuman as to punish a man afflicted with any other form of disease for the manifestations of that disease.

Dr. J. G. Kiernan,* of Chicago, about a decade ago, pointed out that not even the presence of a seeming plot by accomplices was indisputable evidence of sanity. He cited in illustration the condition known variously as a *folie a deux*, communicated, "transformed," imposed and reciprocal insanity.

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* ALIENIST AND NEUROLOGIST, 1883.

Drs. Parsons,* C. K. Mills† and others have cited instances corroborating Kiernan's position, and the following cases are still further instances in the same direction:

Two middle-aged maiden sisters who lived by themselves in a little village had long been considered eccentric, and to hold peculiar religious views, but were not considered insane by the community in which they lived, till in obedience to a revelation to the younger sister, they planned the sacrifice of a neighbor's child. A little boy of six years brought them milk daily, and as he came on his usual errand one evening, the sisters seized him, forcibly removed his clothing, and bathed and anointed him for a sacrifice, and were only prevented from carrying out their designs by the arrival of the boy's father on the scene. The sisters denied that they knew anything about the boy, but he, hearing his father's voice, made such an outcry that he was quickly rescued. They at first prevaricated in regard to their intentions regarding the child, but later becoming somewhat excited the younger sister boldly declared her revelation and her attempt to carry it out, and predicted dire results to the father for trying to thwart the will of God. They were of course both promptly sent to an asylum for the insane, where I had an opportunity to see much of them. The younger, who was the stronger, physically and mentally, was disposed to deny the whole affair, and maintained excellent self-control and good behavior for a time, but finally became more disturbed by her hallucinations and delusions, threw off all restraint; announced that she was the Lamb's bride, and displayed numerous other delusions; openly declared the genuineness of her revelation to sacrifice the boy, and called for God's curses on the people who kept her from obeying the mandates of the revelation.

The eldest sister never had any revelations, and, so far as I could discover, never had hallucinations of any form, but accepted her sister's statements as to her hallucinations most implicity, and heartily joined with her to carry them into effect.

Both of them knew perfectly well that the taking of the child's life was murder in the eye of the law, and in

* Alienist and Neurologist, 1884.

† *Journal of Nervous and Mental Disease*, 1890.

the usual course of events would be punished as such, if discovered. Personally, they were fond of the child, and would have grieved over his death ordinarily, but as one of them expressed it, "When God's command comes in conflict with man's laws, which shall we follow?"

Suppose a merciful Providence had not prevented the tragedy which they were about to enact, what would have been the status of these women before the law? Both of them knew the law of the land, knew that they were doing contrary to that law, and they were not impelled by an uncontrollable impulse to do the act. On the contrary, they showed deliberation and cunning in attempting it; but they were both laboring under delusions and the deed would have been the direct and logical result of the controlling influence of those delusions.

The younger sister had imperative conceptions or hallucinations of hearing, or both, from which arose her delusions. With her superior force of character she so dominated the mind of the elder sister that she accepted and cherished the younger sister's delusions, and was controlled as completely by them as though they had arisen within herself—a state of affairs which I have several times noted in paranoiacs who were intimately associated. With the standard of responsibility, which I have quoted, they must have been found guilty of murder, but I believe they should not have been held responsible.

To cover such cases, I would suggest that the test of responsibility should be the negative answer to the following question: Was the person insane at the time of the act, and was it the result of his insanity, either by reason of his inability to distinguish between right and wrong in relation to the act, or by reason of weakened self-control, or by reason of his being impelled to the act by imperative conceptions, morbid impulses, hallucinations or delusions?

The Education of the Feeble-Minded.

By H. M. Greene, Lawrence, Kansas,

Ex-Superintendent of the Kansas State Asylum for Idiotic and Imbecile Youth.

THE State Board of Charities of Kansas has decided to abandon the special educational feature of the Asylum for Idiotic and Imbecile Youth, located at Winfield in that State. The reason assigned for such course is based upon economic considerations. The "professors," as the members of the Board are pleased to term the young ladies who were employed there as teachers, were dismissed and their places declared vacant; and hereafter, at least during the term of control of these officials the only instruction in letters afforded the inmates will be furnished by attendants, at considerably less cost, thus undoubtedly effecting a saving to the State approximating a thousand dollars a year.

But the amount to be thus saved is not the only, or indeed the principal reason assigned by the Board for this abolition of the educational department of the institution. These gentlemen are frank in their statement. They do not believe in the possibility of educating idiots, and they include all the inmates of the asylum in that class. The process of defining and defending their action is as easy, as we say out West—in blissful unconsciousness of the fact that in some localities it is physically impossible—"as falling off a log." A person without mind cannot be taught. An idiot is without mind, therefore an idiot cannot be taught. Of course, schools for idiots are superfluous squanderers of the people's money. To those who roll this syllogism under their tongues as a sweet morsel, *cadit questio.* Yet, it is only the end which was the beginning of the peculiar logic of the plea.

It is somewhat disheartening to one who has given much attention during many years of a busy life to the

care and culture of this populous and important class of our defective population, to be thus brought back to the starting point of the main question. Institutions for the development of retarded intellect were the last to be founded. The assumed hopelessness of the task has been the efficient barrier against a fair trial ever since Edouard Seguin, the Darwin of the movement, discovered fifty-seven years ago, that idiocy was not the result of deficiency or malformation of the brain or nervous system, but was simply an arrest of mental development, occurring either before, at, or after birth, and that this arrested development could be released by appropriate treatment, and the idiot restored to society and life, if not to the highest intelligence. The almost infinitely patient and laborious efforts of this great man, who would have been renowned as a philosopher but for his unselfish and unremunerated toils for the redemption of the refuse of humanity, at length forced recognition. Aided by the no less devoted and unquestionably more practical co-operation of Drs. H. B. Wilbur and George Brown, the world came at length to believe that this unfortunate class might be capable of appropriating some rays of the light which flooded creation, and that the establishment of special schools for them was neither unwise nor unprofitable.

In the settlement of this question the pioneers began at the most unpromising end. Their feet trod first the Plymouth Rock of the continent they were to conquer. The study, the training and the comprehension of profound idiocy was their occupation. Seguin dealt with the idiot eye, the idiotic hand. Dr. Kerlin speaks of devoting months of labor, of course in connection with other cases, upon one boy, who learned at the end of that time to arrange beads by three, with intermediate buttons. Dr. Wilbur, of the New York institution devoted weeks to the education of the locomotory and prehensile muscles, until the patient, so completely devoid of voluntary movement as to simulate paralysis, was enabled to

stand, to walk and to hold bodies without letting them fall. These are instances, not by any means extreme, illustrating the conscientious and laborious endeavors of the pioneers of this work in America. They bravely met the cheap criticism that idiots were incapable of receiving instruction, a far more pardonable plea at that time, when the opportunity of investigating its fallacy was so limited, than now, after nearly sixty years of research. And they conquered public opinion so completely, that institutions for the training of idiots multiplied with little of the effort required to found them at the beginning.

The golden era of this reform in the treatment of the idiots of America was at its meridian on the year of our National Centennial. In 1876 an organization of superintendents of institutions for idiots was made near Philadelphia, and embraced Dr. Seguin, Dr. H. B. Wilbur, of the New York State Institution; Dr. G. A. Doran, of the Ohio State Asylum; Dr. C. T. Wilbur, a younger brother of the veteran, just entering upon the charge of a State institution in Illinois; Dr. H. M. Knight, of the Connecticut Institution; Dr. George Brown, of a Massachusetts Private Institution, and the host, Dr. I. N. Kerlin, of the Pennsylvania Training School. This meeting marked the decadence of the old methods of operation, and the adoption of new. The compiled transactions of the ten years' life of the Association then formed, those from 1876 to 1886, contain the records of enlarged work upon more extended lines. In these minutes there is increasing evidence of a broadening of the former scope of scrutiny. The forensic aspects of the work are better considered, obligation of the State to care for and comfort the feeble-minded is fully established. The progress in the acceptance by American commonwealths of this class of dependents was marked during this decade. New institutions were established in six States, requiring in almost every instance the erection of new and costly buildings. At least two States heretofore reported, exchanged cramped and outgrown quarters for commodious erections. In one

State, Ohio, very extensive edifices were destroyed by fire, entailing the work of immediate replacement, largely accomplished by the labor of the inmates. These arduous tasks were supplemented by enlargements and improvements in almost every institution. Improved methods of hygienic construction, of heating, lighting and ventilating existing structures, all engaged the attention of the superintendents to the utmost. In addition to these duties, they were obliged, in accordance with the false requirements of political machinery, to be present during much of the time of sessions of the Legislatures of their respective States. Small time to watch Johnny string beads through weary months, or to wait while Mary decided by personal observation at the close of a half-day's scrutiny that a cow had four legs. Little time indeed, for aught than the pressing demands made by the physical requirements of the class. Henceforth, the head of each institution must be familiar with the best systems of drainage, and the safe removal or consumption of malign odors, must therefore be able to detect the value of differing plans of ventilation, must be an expert in the art of supplying efficient and economical methods of heating and lighting his extensive premises, must afford all inmates the maximum of comfort and immunity from physical ills at the minimum of cost—in short, must be the skilled purveyor, plumber, electrician and fireman of the institution. In addition to these duties, he was called upon to outline to architects the plans most conducive to the successful work of his establishment before the erection of its buildings, and to supervise their progress. If to this we add the necessary daily routine work—the reception, consideration and action upon new applications, the procurement of supplies and their constant disbursement, together with the incessant anxieties and labors inseparable from the existence of imperfect conditions anywhere, it will be readily realized that the superintendent will find little time to devote to the scientific or neurographical section of his duties. I

know of at least one superintendent to whom these tasks were a daily study for seven years, without assistance, save for a little season near the close of his experience when a non-resident physician was occasionally called in consultation, and the co-operation during the entire time of his patient and intelligent matron wife. I do not forget that in most institutions the diverse employments I have partly specified are divided among a number of minor officers, but I recall the proverb, older than Sancho Panza, that "The servant who performs the master's work, becomes the master, and the master becomes his slave." It is a badly governed establishment when any employe knows more of its operations than its head.

Among the most valuable papers in this compilation of ten years' work appears a table of classification and causation of idiocy, by Dr. Kerlin, and an ingenious diagram of the height, weight and relative rate of growth of normal and feeble-minded children, submitted by Dr. G. G. Tarbell, of Boston. Valuable as are the other articles—and most of them are valuable contributions to the literature of this subject—these two papers are unfortunately the only attempts recorded in the transactions of the first decade of institution work in this field to furnish what is of the first importance in all calculations and comparisons therein—a systematic, and so far as each asylum is concerned, a complete etiology of idiocy. We shall not be forced far to discover the cause of the failure to furnish what must be ever accepted as the alphabet of this occult science. Aside from the complete engrossment of the superintendent in the material interests of his institution he has been ever afforded slender aid by patrons and parents in detecting the cause of the infirmity of his patients.

The questions embodied in the forms of application are usually indifferently answered, often the most important queries being returned unanswered, and not unfrequently, as observation afterward determines, grossly

incorrect. Parents under the pressure of a false shame, which it is difficult to explain, and impossible to excuse, frequently evade or deny patent facts, and if possible mislead those most interested in relieving them of the intolerable burden of their unfortunate children. I have been often obliged to apply again and again for supplemental information upon vital facts, which at length, in some instances was indignantly refused upon the plea of impertinent and indelicate inquisition. Upon such scanty and misleading information is the history of many cases to be based. Small wonder that amid the variety and multiplication of the labors of administration, the superintendent finds little time to inaugurate exhaustive, or even casual investigation into the causation of the diverse mental characteristics under his charge.

I am far from accusing any one of these worthy officials of a dilatory or *dilettante* attention to the neurological aspects of the great work. That many, if not all of them, are inspired by a sincere purpose to contribute to the pathological knowledge of the subject, I cheerfully allow. That such purpose is of late years subordinated to the pressing demands of management is undoubtedly true. With the sincerest devotion to their position, the superintendents of institutions for the feeble-minded are behind their predecessors in professional acumen and enthusiasm in the pathology of idiocy. They are able quartermasters, clever architects and furnishers, but are certainly not resplendent in discovering the hidden secrets of their unfortunate clientage. Of the sixteen superintendents, who are recognized in the volume of transactions referred to above, nine are no longer in service, the pioneers having mainly passed over to a well-earned reward. The connection with the early work, begun by Seguin, Brown, the Wilburs and a few others, is thus broken, and is not likely to be restored. The study of the idiot under the best possible conditions is not longer systematically prosecuted. Such conviction is here expressed unwillingly and even sadly. These institutions

should be the sources from which valuable information bearing upon the relation of law to the victims of neuroses could be obtained. The attitude of legal action toward a large body of offenders commonly adjudged criminal is becoming more considerate. The best jurists are beginning to look toward psychonosology to discover therein a solution of the difficulties which arise in the administration of law in a large number of criminal cases. Here, if anywhere, should this growing study of medical jurisprudence be able to educe results of infinite importance to the race, results commensurate at no distant period with the entire cost of such establishments. Permit a few words from the earnest and eloquent plea of the late Dr. Kerlin, of the Pennsylvania School for Feeble-minded, delivered to the Eleventh Session of the National Conference of Charities and Correction, held at St. Louis, in 1884:

> It would be wise State economy to attach to all appropriations for charitable purposes an enabling clause that institutions disbursing this charity should contribute to the Commonwealth, in as precise form as possible, statistics of the origin of the evils they affect to relieve. In this way only can a State receive adequate returns for its charitable expenditures. She will not receive them so much in the betterment of the imperfect, pauper and criminal she protects, as in a scientific analysis of causes for these conditions through a knowledge of which must come prevention.

Much might be said upon this part of the subject, but it is time to take up the school section of institutions for feeble-minded, and inquire whether the Kansas officials are justified in the practical abolition of school exercises in their asylum. For that will be the ultimate of the action. The transference of educational work from qualified teachers to attendants is *pedir peras al olmo.* The average attendant in a public charitable institution is a transient character at best, and in most institutions only occupies the position while gathering means to obtain something else. When most proficient in his duties, he is least able to devote time to any systematic course of instruction. The attempt to com-

bine the duties of nurse, chambermaid and waiter with that of teacher would inevitably result in the neglect of the requirements of the latter *rôle*. The inmates under their care must be properly dressed and groomed, the apartments and belongings must be kept in order "whether school keeps or not." This disposition of the matter necessarily disposes of it altogether in all well-ordered asylums. It is to all intents and purposes the abandonment of the school idea, and the acceptance of the custodial condition as the supreme, and practically the single future of the establishment.

The records of the institutional treatment of the feeble-minded bear unbroken testimony to the efficiency of the educational feature. The presence of kindly dispositioned, carefully taught, and pleasant mannered lady instructors has been acknowledged during the entire progress of the history of these institutions as the most conservative element therein. The amenities of this graceful influence have not been confined to the schoolroom. The inspiring music which thrills through the entire building echoes long after the pretty calisthenic movements it guided have ceased their evolutions. The teachers have uplifted into an air of cheerfulness and happiness the entire establishment. This of itself is no mean consideration. The inevitable tendency in all places devoted to the care of minds diseased is toward depression of spirit, a gloomy, self-abstracted mania. These are powerful centripetal influences ever in operation. The value of agencies which are able to dispel these influences, and to throw afar the brooding, melancholic atmosphere, cannot be overestimated. They produce all the difference between a prison and a home, a penal service and a life of healthy, hearty enjoyment, between happy life and joyless existence. The corps of helpers in every institution of this work, which contributes daily and constantly these tonics, without which a a condition of mental and moral anæmia must prevail, is composed of the instructors—the "professors," if our

friends of the Kansas board insist—of these institutions. In the absence of this element the atmosphere, the manners and the morals of the prison will soon dominate, and a dejection, unknown in intensity and horror elsewhere on earth, will settle like a pall upon the entire establishment.

Bad or unworthy teachers are soon disposed of, while a good teacher in an asylum for imbeciles is the most valuable officer within it.

It is probable that the current conviction that idiots are incapable of improvement arises from the class of instructors which has been employed during recent years. The teachers who were familiar with the methods of the earlier superintendents, and who caught to some extent their enthusiasm, have almost altogether laid aside their labors. Those now engaged are conscientious, painstaking guides to ordinary minds, through the ordinary ways of learning. Of the almost infinite toil and patience involved in the endeavor to enlighten the lower grades they know little. With the same honest purpose to perform acceptable duty, and equal ability in its performance, they are not expected to follow the lead of their predecessors in the school-room. It thus occurs that the instruction afforded in the school-room is increasingly more and more of the normal type, and is therefore beyond the apprehension of the pupil. It is not too much to say that apart from the kindergarten and calisthenic classes the school departments of the feeble-minded institutes are now almost *nil* in results. In this view is it strange that the Kansas officials, knowing no methods except those displayed in the asylum they supervise, decide that the educational department is superfluous and unnecessary?

Might it not be well to consider the propriety of placing the superintendency of each institution for idiots and imbeciles in the hands of a thoroughly competent business man, well versed in modern methods from bookkeeping to plumbing, and provide that an experienced

medical practitioner of reputable standing as a neurologist be assigned the entire therapeutical charge, that he be expected, in correspondence with the superintendent, to indicate such inmates as are capable of instruction by any except extraordinary means, and to carefully compile the etiology of the institution, embracing in the regular reports the results of his disclosures, and such recommendations as he deems worthy? There need be no friction between these officials. Each supreme in his own province, they might co-operate for the successful conduct of the particular institution they supervise, and for the progress of the great work to which they would stand committed, and which it should be the endeavor of ever psychopathist to advance. Under the joint control of such competent specialists, it would undoubtedly occur that Legislatures and Supervising Boards will discover that there are mortals in such asylums who require something more than the care provided by the chambermaid and the cook. Then would the State realize in the discovery and prevention of the causes of imbecility a commensurate return for the large sums annually expended in the custody and culture of these unfortunate defectives.

CURABILITY OF INEBRIETY.*

By Jno. G. Reed, M. D., Cincinnati, O.

INEBRIETY is curable. The question is, What and who does and does not intoxicate, and why? The action of some agents and persons are clear in their relation to inebriety. Toxicology points the way to the seat of trouble and neurology to the damage done to the human being by storms; while psychology is ever forming misleading sermons, offering every solution on one hand and contradicting them on the other. It raises paradoxical questions pertaining to inebriety over which an army of medical worthies are preparing to wrangle, taking the human being from which to spin creeds and texts for the betterment of mankind, as the devout of heart have done from the Bible, the epitome of ancient wisdom and modern appeal for "honor bright" argument.

Bacteriology has done much to dissipate the fog that envelops physics, and together with physiology to lay the foundation of truth that will greatly aid in the elucidation of such subtle questions as inebriety. "Soil conditions" is a phrase we must still use in differentiation, and when we speak of them in their relation to diseases, it is often by way of a conundrum lost upon our hearers, or a short cut to shallow water when threatened by cramps. Could we have the claimed gifts of some spiritualist we might catch relations between the material and immaterial, or discover lesions that baffle the microscope and nice dependences that we know nothing about that determine some persons to be drunkards and others to be saints.

What we are is a matter of intellectual conception, by

* Read before the Section of Neurology, at a meeting of the Pan-American Medical Congress, held in Washington, D. C., September 5, 6, 7, 8, 1893.

the operations of brain matter we do not understand. It is self-evident that the chemistry of life must be reviewed many times before we can demonstrate why you and I do or do not get drunk. In the name of sweet nature operating to make active inebriety latent, while she brings to light the better nature of our cases under our medical attendance, we cure inebriety. Out of the depth of the subconscious nature the signal of alcoholic or narcotic inebriety is given, or they are known to be absent by the indorsement or rejection of either toxicant after a trial. Latent inebriety is only known to have existed when induced to be active. The transition from one stage to the other is shrouded in gloom by the likes and differences of men constantly misleading as to the probable. Look for the cause of alcoholic affinity or the alcoholic impulse in the data of a case, and before your investigation closes you will have hunted over the physical and mental field and theorized anew over the chemistry of life. The picture of unhealthful relations and conditions suggest reasons for drinking stimulants, and the nature of mind growth and equipoise of adjustment explain the philosophy of continuous stimulation. Physical change during an epoch of drinking, partly due to the evolution of constitution and partly to alcoholic modifications, indicate the course to co-ordinate relations of mind and body that practically evolute out their inebriate nature. It may be said this process in some degree is constantly in operation in all progressive humans from the age of puberty to twenty-five or thirty—the danger period, and when alcoholism is attacked by our aid and routed, unmasking a bright and sterling nature, we get an insight into conditions upon which alcoholism grafts and of the magnitude of this question. Men drink to live more, and learn by the pain of reaction the wisdom of moderation. Hence the acquiring and destruction of inebriety in an individual signifies two distinct revolutions in his nature, which, like other revolutionary changes marked by distinct epochs of life, may be regarded so far incidental to development that

in cases that evolute out intemperance we are led into phases of conservation of energy and compensation in physical and mental growth that suggest that in them nature errs less in the matter of stimulation than some finite minds fed by passion, of love, hate and disease, are willing to concede. But we must draw our lines on the substratas of the drinking world where we see plainly so much that is wrong and correctable. When we consider the change of our case from abject drunkenness to fixed sobriety, in the light of the "ologies" pertaining to it, we don ot know when or where, nor how we began, in a curative sense, or when, if ever, we may be regarded as ceasing to be curative. All the subtilities of our existence play a part, and should be regarded as an expression of evolution not greater in the physician than in the case that voluntarily applies for medical assistance to aid him to stop physical abuse of himself. A tide of empiricism sweeps over our country intensified by critics and a laudatory press. Every drinker of stimulants ponders over his physical disease of which his intemperance is a symptom. Behind the word "*disease*," thus used, the drinker fortifies himself, and profiting by his experience, resents the moralist's condemnation by placing himself in the category of the sick generally. As social barriers break down, the weakened from intemperance are strengthened, and reform as a result becomes less difficult and is more lasting, with those of fair adaptability. The incurable are only so (in the sense of temperate life) for want of proper facilities. Some inebriate aliens should be restricted by legislation and receive some kind of industrial training of profit to the State.

The statistics of this subject as to heredity or acquired states are enfeebled by so many provisions that the profitable study and rational treatment of drink habit is based peculiarly upon the physiological law of physical affinity and co-ordination of energy. Every case is a special study—a new sociological and hereditary combination in evolution, which we diagnose and prognose in the light of medical science as best we can with the

facts that are gotten. Until the mists of recent sprees clear away, and the higher nerve centers and the tone of the senses have been tested, we feel our way aiming, at control of our cases, that will enable us to combine drug with psychical treatment for promoting harmony. This work is tracing hereditary defects, manifested by mind, adaptation, neurosis, also acquired morbid states, due to unwise use of energy, in a physical and mental sense. Those with large active brains associated with physical weakness, particularly when afflicted with genius without training or without resource, call for the most scrutinizing study to give the proper care adapted to the individual. There is more to be accomplished of value in treatment of the progressive in this way than by the use of any of the mechanical means commonly used. The drunkard or opium eater that is induced to believe unreservedly in me, *I can cure.* If I cannot get him to believe in me no amount of his knavery will hide the fact very long, and when known I will dismiss him at once. The asceticism of the free-will dogmatists pertaining to the doctrinal feature of this question, and claimed to smack of divinity, has lost its terror and doctrinal force; in fact has come to be a mere oil and water ethics, whereby humanity is complimented, and the erring is made more tractable. We have to deal with a psycho-neuropathological condition in the broad sense of constitution and environment. The rust of inaction and the tremor of neurosis suggest the ideal. Modern science is ample, if followed, to avoid extremes and to advise the erring in general and special terms of their misuse of energy.

Those that know what others largely feel are at a disadvantage when beset by a stubborn ambition that gravely leads them toward ruin; also those of much feeling and small ideation, when they lose the path of instinctive rectitude. These errors lay at the foundation of acquired alcoholism, and in all the varied rounds of education, and of hit and miss in the social and business affairs of drinkers and drunkards, they should be traced

in individual cases, as a means of diagnosing the causes of disharmony that induce alcoholic affinity. The monomaniaism of our cases should be discouraged for the sake of versatility, broader citizenship based upon a more equal cultivation of the trinity in human nature. In this you will concur with me who have traced the astonishing mental growth of drunkards when divorced from alcoholism, that before seemed hopeless of anything worthy the name of attainment. When the shackles of strong drink have been broken, if there does not rapidly manifest expansion, the clay has lost its pliability. The great centers are weak, likely congenitally so; and the prognosis is bad.

As we approach the border line still different phases of this question are seen complicated with obscure forms of insanity that baffle our efforts at developing physical equipoise in some cases, while in others seemingly hopeless, we are surprised by speedy recovery.

Drugs are used to conserve energy and to check or encourage nature when too rapid or too slow as the case may be; to modify or destroy constitutional error and local disease. In short, to promote systematic harmony.

We can comprehend the essential materials, and by manipulating them get morbid effects specific in all cases in some respects, in other respects varying with individuals. We can account for these variations to a very large extent by the exhaustive study of cases, while we cannot follow the relation of sensation to mind faculties fully in organic matters. We know the faculties of mind, how they can be strengthened by promoting systematic harmony, and how weakened in special and general ways, or deranged and destroyed in special ways. To the end of applying physiological facts to the sane we can comprehend congenital defects in a general way and acquired complex morbid conditions of irregularity in special ways affecting mental faculties through the physicial functions, and *vice versa.* To pursue this plan of reasoning in the study of individual cases of

inebriety we may comprehend through our intellects and the sympathy of our nature the inebriate defects expressed in conditions and relations of functions and faculties. In other words, perceived through the study of a case, the prominent elements that make up the inebriate disco-ordination, and forms a tangible theory of the more hidden causes in the chemistry of life as we reason to them experimentally, and by test treatment from objective appearances.

If the mental and physical are studied together under their necessary relation to each other as the conditions reveal necessary in the general phenomena, we will not avoid in a thorough canvas of a case to comprehend the essentials of diagnosis, and for treatment, so long as we keep in view that ill-health in distinct terms of our expressions of it, does not produce inebriety, and that it is not due to the number of units of vitality, but to the disco-ordination that is a result of the use made of energy of mind and body in relation to environment. While defined pathological conditions only incidentally aid in sounding the depths of inebriety, they have the same importance in adapting means to cure that they have elsewhere. Every pathological condition that is ameliorated or cured is a step toward that form of systematic harmony that does not admit of harmful degrees of alcoholic affinity or active inebriety. Pertinent to the high aims of diagnosis and treatment are facts of lineal ancestors that will light up inherited constitution. By studying the traits of character, the education and environment in comparison with traits of the parents, we can approximately arrive at the originality or imitative character of a case, and whether in the ascending or descending scale; such study is diagnostic and prognostic in the sense of estimating whether or not a case is necessarily, and for a time non-progressive, or whether he is not the victim of destructible acquired morbidness reasonably within the discernment of medical science. All the statistics pertaining to the question of inebriety are anchored to and tested by the

co-ordination rule applied to the human organism as a whole. Beyond what we can discern of causes and their "disharmonizing" effects, and of methods and means to produce harmony working from matter to mind and *vice versa*, we can do nothing with these cases to permanently benefit them. To quackishly assume great skill in the use of empirical treatment when nature, in ways unknown to us, corrects herself in these cases, while we are in attendance makes the pitfall of the medical pharisee. I cannot here speak of the multiple agencies properly used in the treatment of these cases. I do know ten minutes given to advice, when the physician thoroughly understands the salient features of his case, and the latter gives unreservedly his confidence, is often sufficient to work out a permanent cure.

American genius has always proven adequate to meet the just demands of humanity as rapidly as advanced thought could be made to take root in the thinking people. The sun worshipers started a science in religion that has passed with it through the wars, and founded an almost universal government in amity, characterized by mammoth growth of minds, morality and material wealth; pressing towards the unknowable, they are the formative and reformative forces that seize upon the new conditions of consciousness to lift up the human family. Under the heavens of eternal hope dimly known to them, are the queer, wild, weird aliens of our solicitude, before whom the lights and shades of life play in ecstasy of insanity. Many are wrapped in the gloom of melancholy, wandering about, dangerous to themselves, to this and coming generations, and by liberty unrestricted in the right way are sure to become more dangerous. They are unheeded, as a rule, until they commit some trivial or enormous crime. In the former cases they are often indiscriminately sentenced to suffer, without proper regard for the true state of their physicial and moral malady, and in violation of the spirit of American government. After being many times sentenced in each case, the congeni-

tally vicious would-be murderers, sentenced for brutal assaults, rides to the "works" with the imbecile inebriate sentenced for drunkenness, who is void of maliciousness, and they do labor for crime together. The one is a criminal, the other a sick man, and if too poor to provide proper care and treatment for himself should be protected and treated by the County or State where he is lawfully registered, and, if incurable should become a permanent ward of the State.

Chronic drunkenness, associated with insufficient facilities to be properly treated at a private retreat for inebriates or at the home of patient, should be sufficient cause for confining a drunkard in a State inebriate military and industrial school, upon the warrant of any responsible relative, etc., supported by reliable testimony. Chronic drunkenness in the incorrigible should, as early as possible, cause its victim, by a proper process of law, to be sent to a department for criminal aliens of a State inebriate institution, as a timely preventative of the worst consequences probable in the course of criminal development. Some of these cases should be tested by parole from time to time, while those of well-established congenital viciousness should be treated according to their demerits. Less obscure and more tractable are those addicted to excessive drinking, who are progressive in constitution and mind and have fair moral development. Such persons have friends and means, and by misuse of physical and mental energy during the developmental period cause inebriety to engraft upon them as an acquired disease. They rapidly run the gauntlet of "whisky" philosophy, and thereafter talk sensibly about their habits, and seem to understand morally their humiliating situation. These cases can positively be cured, if treated upon the broad basis of their physical, mental and moral conditions in relation to environment. The contention between their formed mind and the physical alcoholic passion of many of this class, and the results of treating them, fully attest that when the grip of alcoholic

disease is once broken, they soon recover to health, usefulness, and correct living. It is so easy to destroy alcoholic disease in this class, and place them on neutral grounds, as relates to alcoholics, when they are willing to be treated rationally, *every case upon its merits*, that society, whenever disposed to be philanthropic or charitable with its advice, can do nothing that will so surely bring reward in lasting gratitude, as to bring these unfortunate victims of "drink" and narcotics under *rational* treatment. Now that medical men have demonstrated what is best to be done with the drunkards, and some members of the medical profession are trying to better the condition of inebriates by curative medical and legislative means, it is hoped that those who defend the principles of the true American home in reform organizations of all kinds, and in social clubs where good citizenship is considered, will lend their influence to promote this more by influencing the drunkard to be treated rationally, and the Legislature to provide an industrial and military institution for inebriates. Alcoholic constitutions demand alcoholics, and they are found among all classes of people. The "fearless" drink before the world, while those divided in conscience between moral views and physical alcoholic passion take stimulants *on the sly*—till inebriety pushes them to the front in their class. "Whisky philosophy" is a happy delusion—sometimes—don't last however. When it has been "punched" out, and resulting pain of body and remorse of mind set in like a cyclone from everywhere, the victim is coming to a wise understanding, and at such a time, can be cured of constitutional drunkenness. The liquor traffic people respect the drunkard as he respects himself. When he goes to their place of business and gets drunk, he lowers their standing among drinkers, and tends to bring their business into disrepute. A wise liquor traffic man will advise drinkers to be temperate and to be treated for inebriety, if they are accustomed to getting drunk. Every inebriate is a special study and should be treated upon

the merits of his case by a physician competent to investigate it, *and in no other way*, if he would be restored to health. Drinkers should not go to an inhumane person for advice, nor to a rabid "kicker," whose fanaticism blinds him to the true philosophy of drink in human growth—for one is a fool for want of sense, the other for the misuse of the sense he has. The plan I use of treating inebriates, etc., in Cincinnati, calls for constitutional treatment by medicines, medical baths and instructions, in fact all modern appliances. First-class rooms and baths, central, quiet, and strictly private home treatment, and rooms in the country, for patients, when needed. The best references are the better element of liquor traffic men, a large number of people that have been treated and remained cured, etc. The rapid disappearance of apathy evidenced by the liberal support by the medical profession of the physicians now giving special attention to the treatment of inebriety, etc., indicates how much good work is being done among the inebriate classes, and that we shall have better laws for the management of them.

SELECTIONS.

NEUROTHERAPY.

The Eye Treatment of Epileptics.—Ranney (*New York Medical Jour.*) reports twenty-five cases of epilepsy subjected to careful treatment for the relief of muscular and accommodative strain. He concludes: In epilepsy an examination of the eyes (for errors of refraction) and of the eye muscles (for heterophoria) is the first and perhaps the most important step toward a search for sources of reflex nervous disturbance.

No promises that absolute cure can be effected by eye treatment should ever be made to an epileptic; but it is usually safe for the physician and patient to hope that a radical correction of marked heterophoria and abnormal refraction will eventually be followed by decided and permanent benefits.

The results in all cases thus far treated by him seem to warrant the conclusion that at least ninety per cent. of chronic epileptics have been better without bromides, after a satisfactory correction of their eye defects, than they ever were when subjected to the influence of drugs.

In cases where negative results have been observed in spite of a satisfactory investigation and correction of marked heterophoria and abnormities of refraction, he would deem it wise before resorting to drugs for epileptic seizures to search for other sources of reflex peripheral irritation (such, for example, as bad teeth, phimosis, rectal or uterine disease, scars, etc.)

The treatment of heterophoria by prismatic glasses alone is not curative; nor, in his opinion, are very marked beneficial results to be expected from them. Prismatic glasses are valuable aids, however, in determining the existence and amount of "latent" heterophoria prior to the radical correction of such defects by graduated tenotomies.

A Precaution in the Use of Cocaine as an Anæsthetic.—In a recent number of the *Centralblatt für Chirurgie* we find an abstract of an article by Dr. Gau-

thier, published in the *Gazette des hôpitaux*, on the means of preventing the unfavorable after-effects of cocaine when it is used as a local anæsthetic by injection. This consists in the addition of one drop of a one per-cent. solution of nitroglycerin to the injection. The author goes to say that nitroglycerin dilates the blood-vessels of the brain in the same way that amyl nitrite does; in the course of a few minutes after the injection of two or three drops of a one-per-cent. alcoholic solution the skin of the face is seen to grow red and hot, the conjunctiva becomes injected, and the patient complains that his head feels as if it were going to burst. M. Gauthier has taken advantage of this action, antagonistic to that of cocaine, for the last two years.

Changes in the Urine in Myxœdema After Thyroid Extract Treatment.—Ord and White (*Brit. Med. Jour.*, July 29, 1983).

The authors present the following preliminary conclusions from a study of one such case:

1. The urine is increased in volume.
2. Nitrogen excreted in the urine exceeds the total nitrogen of the food.
3. Phosphoric acid and chlorine elimination are unaffected.
4. The increased nitrogenous excretion is chiefly in the form of urea.
5. The body weight is diminished.
6. The temperature of the body is raised.

The Therapeutic Merit of Combined Remedies.—The following excerpt from an article under the above caption, in the *Virginia Medical Monthly*, by Stephen J. Clark, M. D., No. 66 W. 10th Street, of this city, plainly outlines the useful combination of two leading remedies in *materia medica:*

"Binz claims specific antiseptic powers for quinia; other writers are in accord with him on this point, and report good results from large doses in septicæmia, pyæmia, puerperal fever and erysipelas. It is a germ destroyer of the bacilli of influenza (*la grippe*). A full dose of quinine and antikamnia will promptly relieve many cases of this disease. In the gastric catarrh of drunkards this combination is valuable. Quinia is a poison to the minute organism—sarcina; and antikamnia

exerts a soothing, quieting effect on the nerve filaments. A full dose of antikamnia and quinia will often arrest a commencing pneumonia or pleuritis. This combination is also useful in the typho-malarial fever of the South—particularly for the hyperpyrexia—both quinia and antikamnia, as previously said, being decided fever reducers. The combination of antikamnia with quinia is valuable in the racking headache, with high fever, attendant upon malarial disorders. It is likewise valuable in cases of periodical attacks of headache of non-defined origin; of the so-called 'bilious attacks'; of dengue; in neuralgia of the trigemini; in that of 'ovarian catarrh'; and in short, in nearly every case where quinine would ordinarily be prescribed."—*New York Medical Journal*, Nov., 1893.

Hyoscyamine in Nervous and Mental Diseases.—Dr. William Philip Spratling, in a paper on "The Action and Value of Hyoscyamine in Nervous and Mental Diseases" (*Medical Record*), in which he records, among other experiments, a personal experiment with the drug, concludes as follows:

1. That it should never be given in doses of any size in acute diseases of the mind.
2. That it should never be given in any disease in which the least degree of inflammatory action, or congestion, is going on, especially in the brain or its membranes.
3. That it should not be given to a patient who is exhausted, or in cases where exhaustion is likely to occur.
4. That it should not be given in any case for the purpose of producing sleep. It has not been shown by any authority that it has any hypnotic properties.
5. That its use is advisable only in chronic diseases of the nervous system, to quiet excessive tremor, and in chronic diseases of the mind where motor disturbances take precedence over disturbances of the sensorial centers.

Trional for Morphinomania.—At the meeting of the Pan-American Medical Congress September 6th, 1893, Dr. J. B. Mattison, of Brooklyn, N. Y., read a paper on "Morphinism," in which he called attention to the fact that the modern treatment of this disease is compassed mainly by the use of three drugs—bromide of sodium, code-

ine and trional. "These," says the author, "form a combination of unrivaled efficacy, if properly used, in proper cases, and combined with minor aids make a method far in advance of any yet presented to secure two leading objects—minimum duration of treatment and maximum freedom from pain."

Strychnine Injections in Paralysis.—Boltenotern reports (*British Medical Journal*) the cure by this method of a case of alcoholic paralysis of the lower limbs, loss of power in the upper limbs, rheumatoid pains, œdema, enlarged liver, albuminuria and diminished amount of urine. Daily injections of nitrate of strychnine were given, commencing with $\frac{1}{70}$ grains, and toward the end using as much as $\frac{1}{7}$ grains, at each injection. Also warm baths, with cold irrigations and general faradization once in two days. After two months the patient was able to raise himself and to walk without aid or support. In four months the patient returned to his occupation. During the early treatment slight collapse occurred twice, but improved with citrate of caffeine. Thirty-two injections were given; total amount of strychnine used $2\frac{1}{7}$ grains.

Nitro-Glycerine in Sciatica.—Dr. Lawrence (*Revista de Ciencias Medicas de Barcelona*) reports the case of a carpenter of fifty-two years, who suffered for several weeks with sciatica. In order to alleviate the pain he had become a morphine user and could not abandon the habit. After trying a multitude of drugs he gave him 1:100 solution of nitro-glycerine, one drop three times a day, gradually increasing the dose to five drops. Relief was almost immediate, and in ten days he could resume his work, completely cured.—*Lancet Clinic.*

Papine in Ovarian Neuralgia.—Dr. Chas. Nedskov, of Florida, reports a case of ovarian congestion and neuralgia which was speedily relieved by papine.

PSYCHIATRY.

Psychic Effects of Weather.—J. S. Lemon (*American Journal of Psychology*, January) notices the very great influence of weather on the health and temperament, and through them on the customs and habits of men in all

ages. This is reflected in the salutations of all nations, in their religious ideas, particularly in their conceptions of a future life, and a thousand petty details of everyday existence. It affects even crime. Suicide is known to depend largely upon the weather, and it has been calculated that in India 48 per cent. of certain crimes disappear when hot weather gives place to cold. The health of idiots and those afflicted with acute mania is especially dependent upon weather, and its effect on the nervous system is such that many persons can anticipate weather changes from their own feelings. Accidents in factories are said to be much more frequent in bad weather than in good, and physiological phenomena, like knee-jerk, seem to be dependent on it in some measure. Its effect on the appetite is well known, and tea-tasters, who have cultivated the sense of taste till it has become almost abnormal, say that in good weather this sense is more delicate than in bad weather. No systematic study of all these facts and relations has yet been made, but such a study would doubtless well repay the investigator.

NEUROPATHOLOGY.

The Pathology of Paralysis Agitans.— Ketscher (*Neurolog. Centralb.*, March 1, 1893).

Ketscher's work on pathology and morbid anatomy of paralysis agitans was done at Chiari's Institute, in Prague. In three typical cases of paralysis agitans the central and peripheral nervous system, and also the muscles, were carefully examined. Pathological changes were found in every case. Atrophy of all the tissue-elements was present in varying degrees, and the ganglion cells in the brain were markedly pigmented and had undergone disintegration. The nerve fibers in the cord were almost completely degenerated, this being especially marked in the posterior columns and also in the peripheral nerves. Muscular fibers partly atrophic and undergoing hyaline degeneration. Increase of connective tissue in the cord, peripheral nerves, and muscles. There is neuroglia sclerosis in the cord, affecting mostly the cortical layer and the blood-vessels. This is more marked, however, in the posterior and lateral columns. There are also pronounced changes in the blood-vessels, their walls being thickened

and the adventitial sheath distended and infiltrated with round cells. Miliary aneurisms and hemorrhages are found scattered throughout the cord, particularly in the lumbar portion.

As a control experiment, he examined the nervous system of ten old people who had never suffered from paralysis agitans. The changes revealed differed only slightly from those found in p. agitans, in which the same lesions were more pronounced. He agrees with those who claim that p. agitans is nothing more than expression of an abnormally high degree or form of premature senility of the nervous system. He is of the opinion that the primary changes occur in the vascular system, and that the nerve changes are secondary. These careful researches of Ketscher should settle definitely the point as to the gross changes in the brain and spinal cord. These changes are such as occur in every old man, neither more or less marked, and, therefore, are not to be considered as specifically related to or having anything to do with the pathology of paralysis agitans.—Peterson in *Medico-Surgical Bulletin.*

Histology of the Cortex in Insanity.—Colella (*Prog. Méd.*, March 4, 1893; *Am. Journal Insanity*, July, 1893).

Colella has made some valuable investigations with Golgi methods into the histological condition of the cortex in certain mental disorders. He reported his results as follows to the *Académie des Sciences*, Paris, Feb. 20, 1893:

1. In progressive general paralysis with syphilitic infection, the histological alterations involve the blood-vessels, the neuroglia cells, the cellular protoplasm and the protoplasmic prolongations of the nerve-elements: the cylinder axes are only destroyed in a few elements, and that at a later stage. The alterations begin essentially in the vascular network.

2. In paralytic dementia with alcoholism, we find very distinct hypertrophy of the spider cells and different phases of repressive disturbance of nutrition in the nervous prolongations. Rudimentary alterations in the protoplasmic prolongations; blood-vessels intact.

3. In alcoholic psychosis, microscopic examination reveals the existence of an essentially parenchymatous alteration of the nervous prolongations, together with a scarcely appreciable participation of the ganglionary

bodies and the protoplasmic ramifications. Neuroglia and vessels healthy.

4. The close anatomical morbid succession between the vascular network, the neuroglia cells and the protoplasmic prolongations met with in general paralysis, the analogous behavior of the protoplasmic arborizations, and the blood-vessels observed in paralytic dementia and alcoholic psychoses, the absence of all connection between the conditions of the protoplasmic and nervous prolongations, show: (*a*) that we should attribute to each a different physiological signification; and (*b*) that the protoplasmic prolongations have intimate relations with the neuroglia cells and with the blood-vessels, whence it follows that there should be attributed to them a part in the nutrition of the nervous system.—*Ibid.*

Pathology of Locomotor Ataxy.—In an article on this subject (*Chicago Medical Recorder*), Dr. Sydney Kuh concludes that the brain is diseased in the majority, probably in all cases of locomotor ataxy; that quite a number of the most constant symptoms of this disease are very probably and some of them surely, not of spinal but of cerebral origin; and that locomotor ataxy is certainly not merely a spinal, but rather a disease of the entire central and peripheral nervous system.

NEUROPHYSIOLOGY.

Strychnia as a Paralyzant.—The discussion as to whether certain actions could be regarded as evidence of stimulation or depression is one that may go on interminably. Plausible arguments can be made on either side and perhaps the chief value of either side of argument is to prevent the medical mind from being carried away by the other series. The question is largely one of definition. In a certain sense, perhaps nothing can be regarded as stimulant that disturbs function and makes it abnormal. If we have increased cell proliferation, it is of cells with lower vitality. If we have increased action, it is action on a lower plane.

Poole, in the *American Medico-Surgical Bulletin*, makes an elaborate argument in support of the proposition that strychnine so far from being an excitant is a paralyzing

and depressing agent to the spinal centers. This argument is necessarily based on the view that it is the function of so-called motor nerves not to stimulate but to restrain and control muscular action; and hence the effects of strychnia are to be regarded as evidence of lack of central control, permitting ungoverned activity in the muscles. In support of this, he points out that arterial contraction and emptiness with venous fullness, which are found in strychnia poisoning, are also found in deficient oxidation of the blood, after section of the vasomotor nerve trunk, section of the spinal cord, and failure of nerve energy in death.—*Phil. Polyclinic.*

The Effect of Castration on Woman.—Does the removal of the uterine appendages affect the sexual sense of the woman, or in any way unsex her? The truth in such cases usually lies in the means, as I shall try to show.

In my "Lessons in Gynecology" and in my early teachings I maintain that the removal after puberty of the ovaries and the tubes does not unsex the woman—at least not to a greater extent than castration after puberty unsexes the man. In the one the ability to inseminate is lost; in the other the capability of being inseminated; but in both the sexual feelings remain pretty much the same. Males who have lost their testes after the age of puberty are said to retain the power of erection, and even of ejaculation, the fluid being of course merely a lubricating one. The amorous proclivities of the ox or of the steer are the scandal of our highways. Alive to these facts, Oriental jealousy demands in a eunuch the complete ablation of the genital organs. Not only are the testes, therefore, removed, but also the scrotum and the penis flush with the pubes. Hence, to avoid the soiling of his clothes, every eunuch carries in his pocket a short silver tube, which he inserts merely in the pubic meatus, whenever he passes his water. I contended, further, that, apart from cessation of menstruation and from inevitable sterility, the woman after castration remains unchanged, having the same natural instincts and affections; that the sexual organs continue excitable, and that she is just as womanly and as womanish as ever. I held that the seat of sexuality in woman had long been sought for, but in vain. The clitoris had been amputated, the nymphæ had been excised, and the

ovaries and tubes extirpated; yet the sexual desire had survived these mutilations. The seat had not been found, because sexuality is not a member or an organ, but a sense—a sense dependent on the sexual apparatus, not for its being, but merely for its fruition. My inference was that the physical and psychic influence of the ovaries upon woman had been greatly overrated. In the popular mind a woman without ovaries is not a woman. Even Virchow contends that "on these two organs (the ovaries) depend all the specific properties of her body and her mind, all her nutrition and her nervous sensibility, the delicacy and roundness of her figure, and, in fact, all other womanly characteristics." This statement I held to be true only in so far as the ovaries are needful for the primary or rudimental development of woman, but not true when once she is developed; for then they are not essential to her perpetuation as woman.

In time, however, I slowly found out that the removal of the ovaries does blunt and often does extinguish ultimately the sexual feeling in woman, although the removal of the testes after puberty is said not to impair the virile sense of the male. This randon opinion, however, I very much doubt, despite the maudlin sentiment expressed even about eunuchs by De Amicis and by other travelers in the Orient. For the secretion of the seminal fluid is in itself the great aphrodisiac, and how otherwise can we explain the changed behavior of Abelard toward Heloise after his forcible castration? Giving up this analogy, therefore, in my more recent teachings I adopted that of the menopause as suggested by Keberle. I accepted his analogy, although I could not wholly accept his inference that woman is not affected sexually by the natural cessation of her menses. Keberle sums up his opinion in the following words: "In my own experience the extirpation of both ovaries causes no marked change in the general condition of those who have been operated on. They are women who may be considered as having abruptly reached the climacteric. Their instincts and affections remain the same, their sexual organs continue excitable, and their breasts do not wither up." ("Nouveau Dictionnaire de Medicine et de Chirurgie.")

A riper experience, of which time was the main element, has led me still further to modify my views on this subject. Unquestionably the natural change of life when fully established, but not until it is fully estab-

lished, does very sensibly dull and deaden the sexual sense of woman, which ultimately disappears in her long before virility is effaced in man. Nor is the survival of this sense after the menopause so essential to woman, because after the cessation of menstruation she loses the power of procreation, which is retained to an advanced age by man. This is a wise provision of Nature, for, did the sexual sense of the wife outlast that of the husband it could not be gratified. Sensible of these changes, a gifted French authoress makes one of her heroines say, with italicized emphasis: "Men may forget the course of years; they may love and become parents at a more advanced period than we can, for Nature prescribes a term after which there seems to be something monstrous and impious in the idea of (our) seeking to awaken love. * * * Yes; age closes our mission as women and deprives us of our sex." Now what happens in the natural menopause holds good in that artificially and abruptly produced, with this important difference, that in the latter the sexual feeling is sooner lost. I am willing to concede that in some women, by no means in all, whose health has been so crippled by diseased appendages as to extinguish all sexual feeling, there is after castration, a partial recovery of the lost sense whenever health has been regained. Yet even in these cases, as far as I can ascertain—for women are loath to talk about these matters—the flame merely flares up, flickers, and soon goes out.

My own experience would lead me to the conclusion that in the majority of women who have been castrated the sexual impulse soon abates in intensity, much sooner than after a natural menopause, and that in many cases it wholly disappears. This tallies with Glavaecke's conclusion that "in most of the cases the sexual desire is notably diminished and in many cases is extinguished." In corroboration of this statement let me cite, out of many cases in point, a few of the more salient ones. The wife, aged thirty-four, of a farmer, so exhausted him by her sexual exactions that his health suffered very seriously: The appendages were diseased and fixed by adhesions. After their removal menstruation and the sexual impulse continued unabated for a little over a year, when the former wholly ceased, and the latter not long after disappeared. Another case was the very ardent wife, aged thirty, of a man who was not so well

mated to her. She was sterile and had excessive menorrhagia from a uterine fibroid, for which her ovaries were removed. Menstruation did not reappear, and in less than two years all sexual feeling was lost. In a third case, a young lady of high intelligence was reduced to a pitiable condition of ill-health by menorrhagia and by frequent acts of self-abuse. She was not insane, yet, incredible as it may seem, she sometimes masturbated no fewer than eight times in the four and twenty hours. For several months after the removal of the ovaries, which were apparently healthy in every respect, she kept up her bad habits, although the monthly flow never returned. Then the sexual feeling gradually vanished, and she gave up her solitary vice. In a fourth case I removed the healthy ovaries of an unmarried lady of middle age who was queer, but not insane enough to be confined. Towards her monthly periods she was goaded by so irresistible a desire for sexual intercourse that she herself feared her going astray. Not long after her castration, which was done more to save her from reproach than to cure her insanity, she lost the desire wholly and absolutely. She did not, however, regain her reason, and ultimately had to be placed in an insane asylum.

Imlach's case is a celebrated one in medico-legal jurisprudence. This skillful surgeon, after removing the appendages of a woman, was prosecuted by her for unsexing her, and by her husband for spoiling thereby his marital pleasures. The special committee appointed to investigate Imlach's numerous cases of castration at the Woman's Hospital, in Liverpool, reported that they found "a distinct loss of sexual feeling to such an extent as to cause serious domestic unhappiness in not a few instances." The correctness of this report is corroborated from cases in my own practice, of engagements broken off, of conjugal estrangements, and of marital infidelity.

Let me here remark that I was once consulted by the late Dr. Kerlin about the propriety of removing the ovaries from a feeble-minded inmate of his institution, whose shameless intercourse with the other sex was the only bar to her being at large. Being very sanguine that the operation would succeed in its object I urged its performance. He, however, could not get the official sanction which we both wished for our own legal protection, and nothing further was done than to keep the girl under lock and key.

In other sexual characteristics I have not found in these women any marked changes, either physical or psychic. Their affections seem to remain the same; their breasts do not flatten or wither up; they do not become obese; abnormal growths of hair do not appear on the face or on the body, and the tone of their voice and its quality are not changed. In one word, there has not been in a single one of my cases a tendency towards any characteristic of the male type. If any change has taken place, it has been in the direction of old-maidhood.—Dr. William Goodell in *Medical News*.

NEURO-SYMPTOMATOLOGY.

Symptomatology of Intracranial Tumors.—Dr. James Taylor, in a lecture published in the *Lancet*, says:

The trilogy of symptoms which are supposed to be absolutely pathognomonic of this affection is represented by headache, vomiting and optic neuritis. If you have those three present, the existence of a tumor is almost certain. The only condition I can imagine which might cause all of them and not be a tumor, is meningitis, usually tuberculous; but you may have a cerebral tumor with not one of those three symptoms present. In referring to the character of these three symptoms, he said the *headache* of intracranial tumor is not absolutely characteristic. It is in no way localizing—*e. g.*, it is notorious that the headache in cerebellar tumor is very frequently frontal, sometimes occipital, often both. Its chief characteristic is that it is paroxysmal, and another distinguishing point is that it is frequently accompanied by vomiting without nausea. The local tenderness in the scalp which is sometimes present is not to be confounded with the headache, and, whereas the former in many cases is significant, the latter is as yet without localizing influence. The vomiting of optic neuritis may be described as sudden and paroxysmal, as occurring without nausea, but as being frequently associated with headache. It is to be carefully regarded and treated, for a severe attack of vomiting is often the immediate precursor of death. The last of the three—optic neuritis—is the most important. Optic neuritis may be present, for example, in albuminuria and lead poisoning, and, also, it is said, in anæmia without tumor; but in the

great majority of cases there is no doubt that it is indicative of intracranial tumor. It also is not localizing, although he believes that the optic neuritis of cerebellar tumor is, in its characters, frequently suggestive. There is no doubt that, in many cases of cerebellar tumor, the neuritis is particularly intense, being accompanied by numerous hemorrhages, and by the peculiar fan-like arrangement of glistening white spots radiating from the macula, which is common in albuminuric retinitis. This form of neuritis he has seen much more frequently associated with cerebellar tumor than with any other variety, although it is not pathognomonic, only suggestive. Growths in or encroaching on the cortex are characterized more than others by localized pain on pressure over the scalp at the place corresponding to the underlying tumor. The more superficial the tumor, the more marked is the symptom. Localized convulsions—*i. e.*, convulsions starting in some particular segment of a limb—although not present in all cortical tumors, is present only in a tumor in which the cortex is involved. This convulsion may be only slight twitching; it may be local cramp, which ceases before it has extended; or it may begin as either of these, and gradually go on to a convulsion which affects the whole body and abolishes consciousness. After such a fit there is usually local paralysis, most marked in the part in which the convulsion started.

Tumor in the white matter of the cerebrum may have the general symptoms already referred to. Its special characteristic is a slowly increasing paralysis commencing in one limb. There may be no fits, and little or no headache. If the growth encroaches on the posterior part of the internal capsule, there may be anæsthesia, and even hemianopia. The part of the body paralyzed will, of course, depend upon the position of the tumor. It is in such tumors that not infrequently all the three usual symptoms of tumor—headache, vomiting, and optic neuritis—are absent, especially if the tumor is a slowly growing one. The distinctive symptom of tumors of the pons and medulla is the involvement of one or more of the cranial nerves, and it should be remembered that often marked evidences of paralysis may be present before any of the classical symptoms of tumor declare themselves. Especially is this true when the growth is an infiltrating one, and when, so to speak, the structures are slowly strangled, and their functions gradually abol-

ished. In such cases it is not uncommon to have little or no headache, and optic neuritis is probably as frequently absent as present. As regards the cerebellum, there are two distinct classes of tumor in regard to their symptoms—viz, those in which reeling is present, and those in which it is not. In the former class the symptoms are, as a rule, though not invariably, much more severe, and are believed to depend upon an involvement of the middle lobe. In the latter class of cases the symptoms may not be obtrusive. Occasionally, headache and sickness, but nearly always optic neuritis, will be present, but often in such a way as not to excite suspicion, and this is a class of cases in which the diagnosis is apt to be missed. One point of interest, perhaps of importance, is the state of the knee-jerk in cerebellar cases. In some cases it is unusually brisk, chiefly in those in which there are reeling and unsteadiness; in others it is absent, either constantly or at times, and always difficult to elicit. In two cases with such symptoms which I have examined *post-mortem*, the tumor was in the lateral lobe, not affecting the middle lobe at all. Smell, also, is not uncommonly abolished in cerebellar cases. Whether this is a result of the intracranial pressure on the olfactory lobes, or whether it is due to a condition of these nerves analogous to that which abolishes the function of the optic nerves, it is not easy to say. That it is due to any involvement of the actual center is very unlikely.

CLINICAL PSYCHIATRY.

Brain Symptoms from Menthol Sprayed into the Nostrils.—In the discussion on the treatment of hay fever at the meeting of the Pan-American Medical Congress, *Journal* A. M. A., Dr. J. N. Mackenzie said:

"I know of two cases in the practice of a fellow-practitioner in which menthol has given rise to brain symptoms similar to those cocaine produces. They were both singers, and had learned that a little menthol squirted into the nose with an eye-dropper just before they were going to sing would make their voices more resonant, so it had become their practice every time they were to sing to drop in a little of this seemingly harmless thing, and finally the friends of one of them noticed that

she was having hallucinations and that her mind was becoming otherwise affected. This was spoken of to a physician, and when she ceased taking the menthol all her bad symptoms disappeared. The other case was affected in the same way, and on discontinuing the use of menthol became well again.—[Abstracted from "Report on Rhinology and Laryngology" in *Western Medical Reporter.*]

CLINICAL NEUROLOGY.

A Psychopathic Epidemic in Russia. — Ssikozski describes (*Universitelskija Iswjcstija*, 1893; *Neurolog. Centralbt.*, July 1, 1893) a peculiar religious movement that took place in the winter of 1891–92 in the province of Kiev. The author was sent as an insanity expert and member of a commission to investigate the matter. It was determined that the originator of the movement was insane, and that most of his followers presented pathological evidences on the side of the nervous system and psychic functions. Hence he designated the movement as a psychopathic epidemic.

The originator was a Russian, from a country town, aged forty-five years, with intemperate ancestors and himself given to drink until the age of forty years. He then gave up orthodox beliefs, went over to the sect of Stundists, stopped drinking, followed zealously the religious rites of the sect, and often went into a condition of ecstacy. A few years later he began to suffer from hallucinations of smell and general sensibility. He perceived extremely pleasant perfumes, which were comparable to no earthly aroma. This was the smell of the Holy Ghost. During prayer he experienced a remarkable feeling of joy and of bodily lightness, as though he were floating in the air. Then he conceived fixed ideas—that he was possessed of the Holy Ghost, that he was Jesus Christ, the Saviour of the world, that the Bible held prophecies relating to him, and so forth. He would fall into states of excitement and improvise sermons. He obtained numerous followers, who consisted of the peasant population of several hamlets in the province of Kiev. They were convinced of the truth of their leader's statements, were exalted and joyful, sold their possessions, gave up work, purchased

holiday attire and ornaments, bought candies and sugar to give to the poor, and made each other visits as on great holidays. They looked upon their insane leader as the Saviour of the world, in which there should soon be new regulations; no one should die, and no one should have need to work or to care for the future, for God would care for them all. Most of them suffered from hallucinations of the sense of smell. The author came personally into contact with hundreds of these people, and states that eighty per cent. of them had sensory illusions. They perceived extremely agreeable odors, which they described as pertaining to God and heaven. They would smell of their hands and other objects in order to find out the origin of the aroma, which they ascribed to the Holy Ghost. Many had the feeling of remarkable bodily lightness, as if floating in the air. Some heard the voice of God, the whispering of the Holy Ghost, saw heaven open before them, and so on. Many were taken with convulsions, manifestly of an hysterical character. The congregations were always noisy and exalted, many falling to the earth, others jumping, striking themselves on the breast, shouting inarticulately, the women undressing themselves and becoming erotically excited. In some a peculiar form of verbigeration was observed. They would imitate a conversation, but it consisted of incomprehensible, senseless sounds, which they believed to be a language spoken by some people somewhere. In some cases there was complete analgesia during ecstatic conditions. Most of them were emaciated and anæmic. The epidemic was overcome by the authorities, who forbade the congregating of these people. Those who were most insane were shut up in asylums, and the hysterical persons were sent to hospitals and convents. Such as exhibited criminal tendencies were sent away. Exact statistics as to the numbers thus treated are wanting.

The Knee-jerk in Cases of Cyanosis.—In the *Lancet* for January 20th we find one of an interesting series of communications by Dr. J. Hughlings Jackson, which he styles Neurological Fragments. In this particular communication he states that he has not recently had opportunities of making observations with regard to the state of the knee-jerks in many cases of excessively defective oxygenation of the blood. He gives summaries, however,

of three cases observed by Dr. Hawkes, a former house physician of his at the London Hospital. One case was that of a boy, six years old, who died of broncho-pneumonia. On the morning of the day before his death the patient's knee-jerks were present, in the evening of that day they were not elicited with certainty and the next morning they could not be elicited. This case, Dr. Jackson remarks, is not of much value as to the influence of defective oxygenation of the blood, for the jerks were absent only on the day of death.

The second case was that of a woman, fifty years old, who was admitted on the 19th of April, 1893, at 6 P. M., unconscious and cyanosed. She had taken laudanum, which she had been in the habit of taking for dysentery. It was supposed that she had taken two ounces. Her knee-jerks were absent. At 6.45 P. M. the pulse was 132 and stronger; the respiration was 4, expiration being very prolonged; the knee-jerks were absent; there was no corneal reflex; and the pupils were of about the size of a pin's point. In spite of the administration of oxygen, the knee-jerks remained absent until 11 P. M. and possibly longer. At 2 A. M. on the 20th consciousness was returning, and at 2.45 the patient answered questions. On her recovery, the knee-jerks were elicited. Dr. Jackson says that he cannot be certain that absence of the knee-jerks in this case was due solely to defective oxygenation of the blood; for aught he knows, opium itself in poisonous doses may abolish them. The knee-jerks were absent before the subcutaneous injection of a quarter of a grain of atropine at 6.45 P. M. on the 19th.

The third case was that of a man, fifty-four years old, who was admitted into the hospital at 12.50 A. M. on February 7, 1893, after having taken an ounce of chlorodyne. He was not altogether comatose, and resisted the introduction of the stomach-tube; but at 1.15 P. M. he was quite comatose, and the faradic current did not rouse him in the least. He recovered. His knee-jerks were present throughout.

Dr. Jackson thinks it desirable that the knee should be tested in cases of cyanosis from whatever cause. It is to be borne in mind particularly that, according to Dr. Russell's researches, in asphyxiated dogs and rabbits the knee-jerks are exaggerated before they are lost, and after they return they become exaggerated again

before they become normal. In most cases of asphyxia from disease in man defective oxygenation of the blood develops slowly and increases gradually; in dogs that are asphyxiated artificially it begins suddenly and attains its maximum rapidly.

FOLIE À DEUX.—In the *Annales médico-psychologiques* for May and June, 1893, Arnaud has published a study of *folie à deux* based upon cases recorded in French literature and upon three cases observed by himself. He divides such cases clinically into three groups: 1. Imposed insanity (*folie imposée*), characterized by the unusually small mental resistance of the second to the first attacked. 2. Simultaneous insanity (*folie simultanée*), in which natural proclivity, environment and corresponding ætiological factors affect the two persons in the same manner. 3. A form in which the resistance of the second affected is at its maximum, and this patient is overcome only after a long battle, which finally exhausts his faculty of resistance.

There are three factors common to all forms of induced insanity—viz., a similar predisposition, long-continued and great intimacy of the two patients, and, lastly, a certain possibility or appearance of probability in the insane ideas. It is because of this last factor that most cases of *folie à deux* thus far published are of the character of paranoia with persecutory ideas. In all these cases there must exist an intellectual superiority of the first over the second patient. In the first form mentioned above, separation of the two patients gives the best therapeutic results; in the second form separation has no specially curative effect; in the third category, the second patient is apt to suffer in some different way.

In the *Finska Lakaresällskapets Handl.*, vol. xxxiii, part 5, Hongberg details a case of *folie à deux*. A midwife, aged thirty-four years, with no hereditary taint, in good health, visited a married sister in Helsingfors. While there she began to have delusions that she was guilty of sins that must do injury to others, and that she was engaged to some imaginary person of high social position. At a second visit, a year later, she still had the same ideas. After leaving, at the end of this visit, she began a close correspondence with her sister, and her letters were chiefly made up of complaints of intrigues and persecution. At this time she was also the subject

of hallucinations. Shortly afterwards she was sent to the asylum at Lappwik. The second patient, the married sister, was twenty-nine years of age. At the first visit of her insane sister she took great trouble to combat the latter's delusions and to show how groundless they were. Her husband was taken ill with pneumonia, and she was much reduced in health by constant nursing, shortly after her insane sister's departure. She then became depressed and was the subject of delusions that the secret police were after her and intriguing against her. She then sought the author and told him how both she and her sister were persecuted. She showed evidence of hallucinations and was taken to the asylum. Both patients had then become persecutory paranoiacs, and the second was clearly suffering from induced insanity of the imposed form.

[In the ALIENIST AND NEUROLOGIST for January, 1890, the reporter published four cases of *folie à deux* observed by him, one in considerable detail, and in that paper called attention to the fact that for the development of *folie à deux* the essentials were intimacy of the affected persons and plausibility of the insane ideas. He showed, further, that it was on this account that sisters were more apt to become victims because of their greater intimacy, and that delusions of a suspicious and persecutory nature, because more readily given credence, were more easily imposed upon a close associate. Hence the greater frequency of *folie à deux* among sisters, and the usual form of persecutory paranoia.]—Fred. Peterson, "Rept. Prog. in Neurol.," *N. Y. Med. Jour.*

HYSTERO-EPILEPSY AND INSANITY IN A BOY CAUSED BY BITTER-ALMOND POISONING.—Brugia (*Il manicomio*, vol. viii, Nos. 2, 3) relates a case of a boy aged eight years, in perfect health, without hereditary taint, who was poisoned by drinking a considerable quantity of essence of bitter almonds. The intoxication was characterized by general cyanosis, deep coma, and tonic and clonic spasms. He recovered from the immediate effects promptly, but suffered subsequently from irregularly repeated convulsions, and was retarded both in physical and in mental development. His character became much changed. He became morally degenerated, was frequently brought into conflict with the law, and finally on account of more frequent convulsions, was committed to the asylum at the

age of twenty years. Here he was found to have hystero-epilepsy, and the seizures were marked by loss of consciousness and right-sided hemianæsthesia and hemianalgesia. The permanent symptoms were diminished sensibility and loss of taste, smell, and hearing upon the right side, together with diminution of the right visual field. There was pronounced moral and mental weakness, with a tendency to impulsive acts.—*Ibid.*

Temperature in General Paralysis of the Insane.—It has long been a matter noted by alienists that there are great oscillations of temperature in general paretics. Diurnal oscillations, variations from day to day, asymmetrical axillary temperature and general sub-normal or hyper-normal temperature have been ascribed to these cases by some authors. Clouston, in Tuke's "Dictionary of Psychological Medicine," states that the general temperature is highest in general paresis, of all insanities. Kiernan (*Jour. Nerv. and Ment. Dis.*, April, 1878, article by A. E. Macdonald, *Am. Jour. Insanity*, April, 1877, and also in a recent article on the diagnosis of different forms of general paresis) claims that a prominent clinical feature of such cases is the temperature; that it is usually sub-normal, with extraordinary daily variations (agreeing with Rottenbiller, whom he quotes), and that there is asymmetry of the axillary temperature. Rottenbiller (*Allg. Zeitschr. f. Psych.*, 1885) gives similar testimony and cites instances of remarkable daily oscillations, in one case of nearly six degrees. Kroemer (Halle) in the *Allg. Zeitschr. f. Psych.*, xxxvi, 2te and 3te Heft, in an analysis of observations in thirty-four cases, claims that the average general bodily temperature in general paresis is lower than normal; that in the last stages there are great variations daily; and that paralytic accidents are accompanied by a rise of temperature.

Peterson and Langdon (*Jour. Nerv. and Ment. Dis.*, Nov., 1893) have studied the subject in twenty-five cases and reached the following conclusions:

1. As regards the average bodily temperature, we find it to correspond to physiological normes. The statements of our predecessors as to hyperpyrexic or sub-normal averages cannot be sustained.

2. The diurnal oscillations of temperature in paretics also correspond to physiological normes. The statements to be found in literature as to extraordinary daily

variations being frequent in these cases are absolutely erroneous.

3. Asymmetrical axillary differences are so small that they cannot be considered as abnormal, and certainly not of any diagnostic significance.

4. When unusual variations of temperature occur in general paretics, their cause must be sought for in conditions not related to the pathological phenomena of paralytic dementia, but depending upon thermogenic features unrecognized by the physician, or "masked" by the mental state of the patient. Thus, in case II. of our series, an increasing hyperpyrexia was noted during the second week's observations, but the pneumonia causing it was "masked" until the fifth or sixth day, the patient dying on the sixth day. Again in case X., where the highest single daily oscillation was 3.4° and the average daily oscillations for the week 2.2°, the patient suffered from bed-sores which undoubtedly produced some septicæmia. That variations of temperature may take place in connection with the paralytic and convulsive seizures of these cases we do not gainsay, but have made no observations under such circumstances.

Traumatic Neuroses.—It is now a recognized fact in medical pathology that many diseases of the nervous system, both functional and organic, owe their origin to traumatisms. It is also a fact worthy of attention that sometimes the injury is very slight compared with the severe after effects.

The battle has waged long and keenly on that group of symptoms following injury to the spinal cord, as the result of railway collisions, etc. It might seem an easy matter to work out this question so that we could say this case is due to trauma and that one is not. This, however, is what we cannot do. There are cases of spinal trouble with exactly the same symptoms without a history of injury and with such a history.

The terms railway spine, spinal concussion, and Erichsen's disease, are all more or less objectionable. There is, as yet, no distinctive set of symptoms following such injuries to the spine. Many symptoms have been grouped together, but they are not constant in their occurrence, nor in their arrangement. Further, these symptoms appear without trauma.

It is really a difficult matter to explain why a similar symptom group should be called in one case spinal neurasthenia, and in another spinal concussion. Myelitis, lateral sclerosis, or other spinal diseases, caused by injury, would yield the same symptoms as when not so caused. The element of trauma therefore is much more an etiological than a pathological or symptomatological factor.

To speak of railway spine means that the patient has some form of spinal trouble, the nature of which is revealed by a careful study of the symptoms; and that the chain of symptoms and pathological processes giving rise to them were caused by injury, and not by exposure or some such cause. The injury may give rise to functional disturbances of, or organic changes in the cord, or merely to injury of structures around the cord.—*Dominion Medical Monthly.*

A Rarely-noted Smyptom in Nervous Affections of the Intestines.—Dr. Lahnsen (*Muench. Med. Wochenschr.*). After describing the usual symptoms in so-called nervous dyspepsia, the author calls attention to a peculiar pain on pressure of the celiac plexus, which is commonly overlooked. This plexus lies upon the anterior wall of the aorta, immediately below and in front of the aortic opening of the diaphragm on the left side. The continuation of this plexus is the superior mesentric plexus which supplies the whole of the small and large intestines, with the exception of the rectum and descending colon. If we press downward from this situation, after previously emptying the abdomen, if necessary, the patient will invariably complain of pain. This pain, on pressure of the nerves on the left side, is a very characteristic symptom.

His method of treatment is as follows: He allows the patient a general mixed diet, forbidding only carbonic acid drinks and food causing flatulence. At night the whole abdomen is surrounded by moist towels, followed in the morning by cold rubbings, then a glass of natural spring water, a walk, and a light breakfast, consisting of coffee, bread and butter. Later, electric or steam baths, followed by massage of the abdomen. After dinner, consisting of a mixed diet with a glass of wine, rest for one and one-half hours, followed by electric sitz baths and gymnastics, with especial regard to abdominal

movements. Supper at seven o'clock, at which one or two glasses of beer can be allowed. Patient to go to bed at 9:30.—*American Medico-Surgical Bulletin.*

Syphilis as an Infectious Disease.—Dr. H. J. Klotz, in a paper on this subject (*Journal Cutaneous and Genito-Urinary Diseases*), reaches the following conclusions: Syphilis is caused by a micro-organism similar to those of the acute exanthemata. Primary and secondary local manifestations are due to the direct influence of this parasite. Its presence in these lesions is proved by their contagiousness. The general symptoms accompanying the stages and immunity are the result of the action of toxines. The micro-organisms, under the influence of their own chemical products, or under the influence of treatment, or in consequence of their own innate character, are either eliminated, or become extinct, or undergo some modification, or produce a new kind or species of micro-organism. This secondary parasite, which is similar to the bacillus of tuberculosis, can indefinitely remain in the organism, in a dormant condition, until called into activity by some accidental irritation. Accidental irritation produces the tertiary (gummatous) manifestations; but not the visceral affections, like tabes, general paralysis, etc., which are the result of intoxication with the toxines of the primary parasite. The secondary micro-organism is inoculable, like the bacillus tuberculosis, and produces lesions identical with the tertiary syphilis, but not primary syphilis. Tertiary syphilitic manifestations may, therefore, be due to direct inoculation without the necessity of a primary or secondary stage.

Neurasthenia and Tenotomies.—Dr. L. Bremer thus expresses his mind on the subject in the *Medical Standard:*—There are no words strong enough to condemn the tinkering and fraudulent operations now so frequently practiced by either unsophisticated or knavish eye-doctors on a large class of neurasthenics, and neurotics in general, by clipping the muscles of the eye. The insufficiency of the ocular muscles is one of the well known and generally recognized symptoms of Beard's disease, and it was not necessary to invent a number of high-sounding Greek names, such as exophoria and esophoria, etc, much less was it indicated to perform

such operations as partial clipping of the ocular muscles.

If it should be objected that in a number of cases great benefit has been derived from such treatment, my answer is, that by treating the sexual organs, in women and men who presented the same kind of eye and general nervous symptoms, alleged benefit has been derived; and that the latest fad and fraud, orificial surgery, with headquarters in Chicago, claims the same wonderful results from such operations about the rectum. In fact, there is no specialty all the way from original ones down to "osteopathy" and faith cure, which has not celebrated its triumphs on the wide field of neurasthenia.

General Paralysis at Puberty.—Dr. Herbert C. Bristowe (*Brit. Med. Jour.*) records a case of general paralysis of the insane at puberty, with a history of traumatism, but one which cannot so easily be put on one side, on the ground that the injury might have been due to an epileptic seizure. The whole history of the case suggested a widespread lesion. At the present time the boy lies in bed all day, with his knees drawn up touching his chin, takes no notice of his surroundings, and passes a purely vegetative existence. He takes food when it is offered him, but also opens his mouth to bite at anything else that is placed in front of it. He exercises no control over his emunctories. The muscles are atrophied, but irritable. Knee-jerks cannot be obtained. *Tache cérébrale* is well marked. He mumbles incoherently, and is often noisy at night. The body is much emaciated, in spite of a voracious appetite well satisfied. He has never suffered from vomiting, nor had optic neuritis.

Neurosis Following Enteric Fever.—Dr. William Osler, of Baltimore (*Amer. Jour. of Med. Science*, January, 1894), publishes under this caption the records of several cases of what has been previously described under the name of "typhoid spine," a painful condition of the back following attacks of typhoid fever, and regarded by many authorities as evidence of a spondylitis or perispondylitis of the vertebræ. In all cases mentioned by Osler there appeared a more or less pronounced condition of neurasthenia, and the writer is disposed to regard the painful condition as a neurotic manifestation analogous to

the well-known "hysterical spine." He admits the possibility, however, of existence in some cases of actual structural foundation, which might be of the nature of a periostitis, such as occurs not very rarely about the sternum and ribs; or it might possibly be the outcome of actual disease of the cord.—Prof. Allen J. Smith, "Rept. on Practice," *Texas Med. Jour.*

Concussion and Memory.—Dr. J. T. Woods, in a paper on this subject (*Toledo Med. and Surg. Rep.*), concludes:

1st. That a man receiving an injury that produces complete unconsciousness from brain concussion, may not and probably never does know the occasion of his injury nor that he is injured, until he afterwards learns the fact.

2d. That memory of events immediately preceding may likewise be erased.

3d. That in the state immediately following the concussion, conversation and actions that may be apparently rational take place, without the patient being afterward able to recall or know aught of what occurred, the action, both mental and physical, being purely automatic in character—just as in dreams, facts may be stated, or in the somnambulic state remarkable physical feats are possible.

Bromide of Potassium Poisoning.—Dr. Greenless (*N. Y. Med. Jour.*), writes that an epileptic took 75 grains a day for three weeks, when stupor, coma, and extreme prostration and death followed. The *post-mortem* showed intense congestion of the meninges. Another case, an epileptic, the same amount of bromide of potassium, 75 grains a day, was given and in ten days coma and death followed. Both the brain and meninges were congested and the kidneys were in the advanced stage of cirrhosis. The other case was less prominent and clearly from bromidism that was the result of long use of the drug. In some cases of inebriety larger doses of bromide produces stupor and prostration, with slow recovery, followed by continued prostration.

Nervous Asthma.—Einthoeven, a Scandinavian physician, recently published an able article dealing with the causes and symptoms of nervous asthma. He cites the various theories of the origin of this disease; but in our opinion, none of them are correct. The real origin of the

disease is a hyperæsthetic condition of the abdominal sympathetic nerve, which in many instances is due to disordered digestion. The writer has cured many cases of nervous asthma by curing the digestive disorder to which it was due. Dilatation and prolapsus of the stomach are very common in these cases.—*Modern Medicine and Bacteriological World.*

Hiccough and Hereditary Syphilis.—Carini (*Internat. Klin. Rundschau*) cites a number of cases, and advances the opinion that hiccough in the new-born is a symptom of hereditary syphilis. It is almost always present in such cases. He regards it as one of the earliest signs of the disease, coming on at times before the coryza and frequently but a few hours after birth. The effects of specific treatment on the hiccough are marked.

EDITORIAL.

[*All Unsigned Editorials are Written by the Editor.*]

The Association of American Medical Colleges.—The fifth annual meeting of the Association of American Medical Colleges will convene at Maple Hall, Grand Pacific Hotel, San Francisco, California, at 3 o'clock P. M., Wednesday, June 6th, 1894. Action will be taken at this meeting upon the following amendments, to wit:

Rush Medical College, by unanimous vote, submits the following amendment to Sec. 5, Art. III., of the Constitution, "providing that students who intend to graduate in 1899, or in subsequent classes, four years of medical study and an attendance upon four annual courses of lectures of not less than six months' duration each will be required. Provided, that graduates of literary colleges who have taken a course of scientific studies, graduates of schools of Pharmacy that require three years' study and adequate prelimary education, and graduates of Dental colleges requiring two years of study and adequate prelimary education, may be admitted to the second year's work or course of lectures in the college without examination."

The present wording of Sec. V, Art. III, is as follows: "Candidates for the degree of Doctor of Medicine shall have attended three courses of graded instruction of not less than six months' duration each, in separate years."

The Barnes Medical College, of St. Louis, will present the following "four-year" proposition:

WHEREAS, It is the desire and purpose of the Faculty of the Barnes Medical College to aid in advancing the standard of Medical Education in every prudent and proper way, and

WHEREAS, It is desirable, from an educational and humanitarian point of view, to fully qualify those who offer to take charge of so delicate a structure as the human body and of so valuable a thing as human life, and

WHEREAS, The extensive departments of Medical Biology, Chemistry, Toxicology, Microscopy, etc., now parts of all well-equipped modern medical institutions, require so much more of time and labor to master than has hitherto been devoted to them in our medical colleges, therefore,

Be it Resolved, That, in order to afford to the teacher and student alike, such time as is necessary to complete a proper curriculum in each department of Medicine, of all regular medical students who intend graduating at the Barnes Medical College at the close of the session of

1899 and 1900, and in all subsequent classes, four years' medical study and attendance upon four regular courses of medical and clinical lectures of not less than five months each, shall be required; provided, that graduates of Literary Colleges, who have taken a course of Scientific study, graduates of schools of Pharmacy and graduates of schools of Dental Surgery, may be admitted to the second year's work and course of lectures without examination.

Resolved (second), That we instruct the delegate of the Barnes Medical College to the meeting of the Association of American Medical Colleges, to be held at San Francisco, Cal., on June 5th, 1894, to vote upon all questions arising before that body, in accordance with the above resolution, and to use all honorable means to secure the unanimous adoption, by all colleges, of requirements for graduation of students, of Four Regular Courses of Lectures of not less than five months each in different years.

Questions of the Code.—When a weather-beaten cruiser, after having been kept afloat beyond the ordinary life of crafts of its kind, by watchful seamanship of skillful officers and faithful crew, finally puts into port for repairs, it is the custom to thoroughly overhaul and repair her, remedying all defects discovered through seafaring experience, and even to remodel her, and re-supply her if she may be deemed fit to continue her career with safety on the high seas.

At this juncture, when the old code, which, through the bolstering and fidelity of its friends, has served to mould together the profession of the United States, is to be revised by direction of the American Medical Association, it is important that the work should be done thoroughly, wisely and well. Thus only may its stability in the hearts of the medical profession, and their future fidelity to it be assured. In every change it should be adapted to the present advanced state of medical science and to the intelligent common-sense of mankind.

The chief subjects in the Code to be revised are those of advertising, patents and consultations. These should be so plainly, unequivocally and liberally presented as to challenge the approbation of the best judgment of mankind, and be in harmony with what humanity and science expect of a broad, liberal, advanced and advancing profession, the nearest of all professions to divinity itself in bestowal of the best fruits of science and philanthropy upon human kind.

The interdiction of patents by physicians is in derogation of the personal right of the doctor, and tends to

turn the genius of discovery away from medicine and surgery. All that philanthropy requires, and all that the Code should enjoin, is that no physician who becomes a patentee should put an exorbitant price on any invention designed to alleviate human suffering or remedy human deformity or natural defect, and that the construction of any apparatus, or the composition of any patented remedy, should not be kept secret from the profession.

The patenting of an apparatus or of a new remedy enables its manufacturer to be protected so that it may be profitably and cheaply made, and the true physician, while worthy of reward for his inventive genuis, as well as his skill, will not put an inordinately high price on the product of his brain any more than the skilled specialist against whom the Code does (though it might as justly) provide.

The unworthy physician who patents an article of professional value might be enjoined, in penalty of forfeiture of fellowship, from gratifying greed of gain at the expense of his patients' welfare, but not inhibited from securing the legitimate reward of his genius by mandatory Code prohibition.

The provision of the Code against patents has undoubtedly turned inventors away from medicine, for there is a pecuniary obligation on the part of the physician towards himself and his family as well as a philanthropic duty to afflicted mankind. We should take care of our own, as well as of the people's interests, and yet the people's interests would be best subserved by encouraging medical genius to expend itself in the interests of the profession and of humanity by countenancing and protecting the worthy patentee of a useful instrument of relief or skill by giving such full fellowship on the broad bases of liberal fraternity and philanthropy.

The Dangers to which Doctors are Sometimes Subjected through the ingratitude, mendacity and moral depravity of their patients is often as great as that resulting, in certain instances to alienists, from mental alienation of a character not so pronounced as to convince the popular mind or the judgment of a jury. This has been so often shown in one way or another that it would almost seem as if "sufferance" were "the badge of all our tribe." This painful truth was made

especially apparent in the trial in which Dr. S. Coghill sued M. Clovis Bonaparte for attendance on himself for alcoholism, and on a lady who passed for his wife for what was described as "a grave specific disorder of a highly contagious nature." The bill had been sent in but not paid. The defendant was impecunious, and conceived the idea not only of not paying the doctor's bill, but of making the doctor pay large damages by threatening an action for divorce against the woman who he maintained was not his wife, in which the plaintiff was to be made co-respondent. He drew such a picture to his so-called wife of an imaginary action that was to be commenced by Dr. Coghill, and that was only to be averted by money, that he got her to make what purported to be a confession of disgusting actions involving the plaintiff, and to part with all her jewels. She finally acknowledged in court that the documents were mendacious from beginning to end. The jury in their verdict declared that Dr. Coghill left court without the slightest imputation on his character.

Fortunately for the doctor in this case the woman's conscience finally saved him through a remorseful confession. But what shall we say of her companion in iniquity—that reprobate degenerate descendant of a once mighty man, the star of whose genius, though it went out in the darkness of disappointment, blasted ambition and hopeless captivity, once set France on fire with glory and the world aflame with fear? How are the descendants of the "Mighty fallen!"

The Bible on Sexual Perversion.—G. Frank Lydston, M. D., of Chicago, has been searching the Scriptures on this subject (we hope he searches them often for other light), and has called attention, after noting the antiquity of this form of perversion as gleaned from profane history, to the following Epistle of Paul to the Romans, Chapter 1: 24, 26, 27 and 28 verses. The text reads:

Wherefore, God also gave them up to uncleanness through the lusts of their own hearts, to dishonor their own bodies between themselves.

Who changed the truth of God into a lie, and worshipped and served the creature more than the Creator, who is blessed forever. Amen.

For this cause God gave them up unto vile affections; for even

their women did change the natural use into that which is against nature; and likewise also the men, leaving the natural use of the woman, burned in their lust one towards another; men with men working that which is unseemly, and receiving in themselves that recompense of their error which was meet.

And even as they did not like to retain God in their knowledge, God gave them over to a reprobate mind, to do those things which are not convenient.

He remarks also: "I am not aware that attention has thus far been called to the scriptural evidence of the ancient existence of sexual perversion. If, however, the scriptural dates be correct, it was recognized at least as early as A. D. 60," and regards these quotations as certainly of interest as showing the early although ignorant recognition of this peculiar morbid state.

American Medical Association.—The American Medical Association will meet in Odd Fellows' Hall Building, cor. Market and 7th Sts., San Francisco, June 5th, 1894.

Assembly Hall, for the general meeting, has a capacity of 1,500; the twelve smaller halls for Section work, range in capacity from 500 downwards, with committee-rooms adjacent.

Headquarters for the Association have been located at the Palace Hotel, cor. Market and Montgomery Sts., only four blocks from the place of meeting. The registration-room will be in "Marble Hall" of this hotel.

Hotels, centrally situated and convenient to the place of meeting, have quoted special rates, for members and their families, which will apply during the entire stay of the guests, who should, upon registering, signify that they are in attendance upon the meeting of the Association.

Post Office Section K. is located in the Palace Hotel, on the office floor, adjacent to the Registration-room, where members can receive all mail matter by having it so addressed. K. H. Plummer, Chairman, Committee of Arrangements.

The American Medical Editors' Association will meet on Tuesday, June 5th, and give a banquet at the Palace Hotel on the same evening.

The Pacific Medical Record has changed its name to *Medical Sentinel.* Address, San Francisco, as heretofore.

The Spoils System.—The *Medical Record*, quoting from the *Chicago Medical Recorder*, makes the following comment:

> Commenting on Dr. D. H. Tuke's criticisms of the disgraceful application of the spoils system to Kankakee, the Chicago *Record* remarks: "If this abuse of political power is rough on the medical men who suffer dismissal, how about the public in general, which frequently loses at one swoop of the spoilsman's axe the benefit of an efficient medical officer's whole lifework and experience. The practice works harm both ways, and is a blot on American political usage. And the dismissal of Dr. Dewey by Governor Altgeld is recognized by the medical profession as a world-wide disgrace." Altgeld is the name of the man, and he should be remembered by all good Illinois doctors.

The *Medical Record* says the *North American Practitioner* voices the feeling of every local physician in the United States. When the value of experience gained by years of untiring devotion to the care of the insane goes for naught, in the furtherance of political ends, it is time that the people should be heard in the interest of these unfortunates and that the care of our asylums should not be subject to the appointing power and dictation of political demagogues. What imperial right has any political party by which the management of our charitable institutions shall obey its behests? Other and better legislation is needed.

An Organization of Medical Journal Publishers was effected in Washington during the meeting of the Pan-American Medical Congress, September 5–8.

This organization aims at protection and benefit to the Publishers of Medical Journals, as well as to the Advertisers. Whilst the Publishers of many of the Medical Journals are also Editors, and probably belong to the Association of Editors, which meets simultaneously with the American Medical Association, they certainly must recognize that there are matters pertaining to the business and financial interests of the journals that do not come within the purview of the Editors' Association. We understand the object of the Publishers' Association shall be for the better protection of legitimate advertisers and the publishers, and is not in any way to take the place of or interfere with the work of the Editors' Association. Such being the case, the organization of the Publishers' Association should meet with

their hearty co-operation, and we trust that editors will take note of this proposed movement. Should they themselves not be publishers of the journal they edit, we hope they will advise their publishers of the meetings and urge them to attend and give their co-operation to such an organization as shall be for their mutual protection.

Ernest Hart.—When Mr. Ernest Hart came to this country the honored guest of the medical profession and the American Medical Association, it would have been as well for his reputation if he had not felt called upon to reform the morals of this country, and especially of Dr. Wm. A. Hammond. In the reply of Dr. Hammond, attention was called to the fact that Mr. Hart had registered upon the public register of a hotel in Washington as "Ernest Hart, F. R. C. S., D. C. L., London, Editor *British Medical Journal*, Dean of St. Mary's Hospital," a thing which any American possessing half the modesty which Mr. Hart advised, would not think of doing.

Now comes the *National Medical Review*, having investigated matters a little further, and says:

> The following letter is from one of the physicians of St. Mary's Hospital of London, one of the best known physicians in Great Britain, and very well known in this country as well. We have perfect liberty to use his name, but do not care to do so at this time. The letter reads as follows: "Many thanks for your letter and newspaper extracts. Mr. Ernest Hart has *no connection whatever* with St. Mary's Hospital, but about twenty-five or more years ago he was, for a short time, Dean of the Medical College of St. Mary's."

Third Triennial Session.—The Congress of American Physicians and Surgeons meets in Washington, D. C., May 29 to June 1, inclusive.

The preliminary programme presents the following on the part of the American Neurological Association:

"The Influence of Infectious Processes on the Nervous System:"—"Pathology and Etiology," by Dr. Jas. J. Putnam, Lecturer on Nervous Diseases in the Harvard Medical School; "The Relation to General Nervous Diseases," by Dr. E. C. Seguin, of New York; the "Relation to Mental Disease," by Dr. Charles K. Mills, Professor of Mental Diseases and of Medical Jurisprudence in the Universlty of Pennsylvania; and "The Therapeutics," by Dr. F. X. Dercum, of Philadelphia.

A Medical Statesman.—Dr. Guido Bacelli, the Professor of Medicine in the Policlinico of Rome, is sometimes styled "the Virchow of Italy." He has recently been appointed Minister of Public Instruction. He had formerly held the same portfolio from 1881 to 1884. He was late President of the Board of Health for the Kingdom of Italy. He is an eloquent orator, and has been chosen to preside over the International Congress to be held in Rome, next Easter.

Professor Bacelli will be remembered as having made the eloquent response, in Latin, to the address of welcome, at the Tenth International Medical Congress. To those who never before heard the Latin language spoken by an Italian, its effect was thrilling beyond expression.

American Neurological Association.—The Twentieth Annual Meeting of the American Neurological Association will be held in connection with the Congress of American Physicians and Surgeons, at Washington, D. C., on May 30th and 31st and June 1st, 1894, the last three days of the Congress. There will be only one daily session from 10 A. M. to 1 P. M., so as not to conflict with the meetings of the Congress which are held in the afternoon.

An Interesting Jenner Relic.—The *Boston Medical and Surgical Journal* states that at a sale of unredeemed pledges at a London pawnbroker's, there was purchased a casket in which the freedom of the city of London was presented to Edward Jenner, on the 11th of August, 1803, for "his skill and perseverance in the discovery of, and bringing into general use, the vaccine inoculation."

The Association of Military Surgeons of the United States.—The Fourth Annual Meeting will be held in Washington, D. C., May, 1st, 2d and 3d, 1894.

This National Organization is composed of Medical Officers of the U. S. Army, U. S. Navy, National Guard of the United States, and the Hospital Marine Service—in whose service are many of the most celebrated and distinguished surgeons of our country.

American Medico-Psychological Association.—The Fiftieth Annual Meeting will be held at the

Continental Hotel, Philadelphia, May 15th, at 10 A. M., and continuing May 15th, 16th, 17th and 18th, 1894. Opening with an address by the President, Dr. John Curren, of Warren, Pa., and the Association address by Dr. S. Weir Mitchell, of Philadelphia.

Report of Committee on Revision of the Code of Ethics of the American Medical Association.—

CODE OF ETHICS.

Your committee appointed to consider the advisability of amending your Code of Ethics, have had the subject under consideration, and at one time outlined the changes which they believed desirable. The matter was committed to one of its members to write out. However, pressure of other affairs, beyond his control, prevented his doing so. In addition, the following new questions have pressed for consideration: What should be the relations of the profession to railroad and other corporations, to accident insurance companies and other societies, to free dispensaries, to hospitals and to other institutions? The data for answering these questions were not at hand, and would require much time to collect and carefully study. We therefore desire at this time to report progress, and ask for further time to perfect our report. We would, however, suggest the following as tending to promote the spirit of equity between physicians, and so increase professional prosperity:

First.—We would omit all sections of the Code that describe the obligations of patients to their physicians and of the public to physicans. The reason for this suggestion is that the Code is not designed either for patients or the public, and so the sections are superfluous. This omits ten sections under Article II., on pages 5, 6, 7 and 8, and Article II., on page 20.

Second.—We suggest the placing in the same list with the copyrighting of medical books and other similar work, the patenting of all mechanical appliances used in medicine or surgery. The Code says nothing respecting the copyrighting of medical publications, and we find no good reason why it should say anything respecting the patenting of mechanical devices.

Third.—We recommend the more accurate definition of the term "consultation," as we find good reason to believe that serious estrangement has arisen between physicians because of the different ideas they attached to this term. The Code of Ethics, page 14, second line from top, says that in a "consultation" the responsibility must be equally divided between the medical attendants—they must equally share the credit as well as the blame of failure. With this statement before us, it is clear that there can be no consultation when one physician meets another for the purpose of obtaining from him an account of the case, or pertinent facts of family history, or a record of the past management of the case, in order that he may more intelligently assume the entire

responsibility of its future conduct. Thus the existing Code of Ethics of the American Medical Association defines a consultation substantially as a meeting of doctors to discuss a case, to the end that they may equally share in its further management. By the same authority a consultation is not a meeting of physicians with a case, in which one gets all the facts possible from the other or others, as a preliminary to his assuming entire responsibility in its future conduct.

From these data it is clear that usually the specialist does not consult with the general practitioner. He simply obtains all the facts the general practitioner possesses, preparatory to assuming full control of the case. There are many other occasions for the meeting of medical men, in connection with cases of sickness, that are in no sense consultations according to the existing Code. Hence we think that in the interest of scientific accuracy, there should be a discrimination made in the study of consultations, as present conditions differ widely from those of forty or more years ago.

Having premised this much your committee recommends the alteration of Article IV., section 1, page 11, Code of Ethics, to read as follows: "A thorough medical education furnishes the only presumptive evidence of professional abilities and requirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as the good of the patient is the sole object in view, and this is often dependent upon personal confidence, no intelligent practitioner, who has a license to practice, from some medical board of known and acknowledged legal authority to issue such license, and who is in good moral and professional standing in the place in which he resides, should be refused consultation when it is requested by the patient."

Fourth.—It is suggested that it would be wise to re-write the Code in phraseology so plain as to make it a practical common-sense document for daily guidance in the performance of our various duties and an aid in meeting responsibilities incident to our professional life.

Finally, your committee found that in but few medical colleges has this document been taught, and never as a portion of the required curriculum.

It is believed that professional success of the best sort depends as well upon a practical knowledge of medical manners and medical ethics as upon anatomy, physiology, pathology, therapeutics or surgery. To be master of the rules of conduct by which our neighboring doctors can be made our friends and kept such, so that the people may see that the medical men who serve them form a band of brothers devoted to the service of suffering humanity, is to possess a most desirable professional resource. The committee finds the Code of Ethics contains the essentials for the successful conduct of a medical career, as these have been learned by the actual experience of the best members of the medical profession, from the earliest dawn of history to the day on which it was written. It sincerely trusts that the present discussion will lead to a

more intelligent appreciation of its truths by all physicians, and especially that hereafter it will be made a text-book in every medical college, and an accurate knowledge of its contents be made a condition of receiving the degree of Doctor of Medicine.

The committee deprecates all efforts to abolish, belittle, distort, ridicule or otherwise lessen, its hold upon the profession. It is a heritage representing at once the best characteristics of our profession during all its history, and a scientific document that points out the line of greatest prosperity in the future. It would seem better far, that, in the spirit of scientific students, we patiently inquire whether in any respect the changes incident to the last half-century warrant any modifications of statement of any portion of this document in the interest of good to all and ill to none, for the increased prosperity of medical art and science and a more united professional power over those whom we serve.

Signed: HENRY D. HOLTON, *Chairman.*
LEARTUS CONNOR.
DANIEL T. NELSON.
BENJ. LEE.

MINORITY REPORT.

The minority of the Committee on Revision has the honor to report against any kind of revision of the Ethical Code:

1. Because the language of the Code is clear, concise, and accurate, and conveys to the mind the soundest ethical principles derived from the moral maxims of all civilized nations, compiled and admirably arranged by practical men of acknowledged ability and wisdom.

2. Because the Code is explicit, liberal, broad, humane, and founded on truth, justice and reason, and is free from magisterial assumption or oppressive exaction.

3. Because the Code contains full particulars, without superfluous details, for the guidance of all physicians, for the instruction of beginners, and for information of the people.

Signed: HENRY D. DIDAMA.

Medico-Psychological Association of Great Britain and Ireland.—At the last Quarterly Meeting, held in Glasgow, on Thursday, the 8th March, 1894, the following papers were read: By Dr. Carswell, a paper entitled "The History of an Experiment in Dealing with the Reported Cases of Insanity Occurring in the Barony Parish of Glasgow." The discussion was continued by Dr. Alexander Robertson and other gentlemen having personal experience of the subject. Dr. W. W. Ireland read a paper "On Affections of the Musical Faculty in Cerebral Diseases." Dr. Oswald read a paper "On Cases of Multiple Neuritis with

Mind Involvement," and showed a "Calvarium from a Case of Recurrent Mania." Dr. Urquhart referred to the "Royal National Pension Fund for Nurses, with Regard to the Possibility of Joint Action by the Scottish Asylums." The dinner was given in the Windsor Hotel. The Bronze Medal and Gaskell Prize were competed for under the usual conditions, but the awards have not been communicated to us.

The next Annual Meeting of this Association will be held in Dublin, on June 12, 1894, and the following days.

The business of the Association will be considered on June 12, on which day also the incoming President will take office and deliver his Address, and the Annual Dinner of the Association will take place. Fletcher Beach, M. D., 11 Chandos-street, Cavendish-square, London, W., is Hon. Gen. Sec.; Conolly Norman, F. R. C. P. I., Richmond Asylum, Grangegorman, Dublin, is Hon. Sec. for Ireland.

Dr. John B. Hamilton will Stand for Congress from one of the Chicago Districts.—We hope the profession, with one accord, will vote for this able and popular editor of the *Journal of the American Medical Association*, and when he gets there (as he surely will) ask him to work for the interests of the profession at Washington, especially for a National Board of Health and a Physician in the Cabinet.

The profession should have more Virchows to plead its cause in the councils of the nation. Its cause is the welfare of the people. If any interest deserves recognition and representation at Washington it is the medical profession, and Dr. Hamilton is the man to represent it.

The Law of Kindness and the Coxey Army.—There are certain laws, psychical, moral and physical, which no nation aspiring to healthful greatness can ignore in dealing with the people. All governments are, in the very nature of their functions, more or less paternal. Post-offices, post roads and all franchises to capitalists that promote public comfort and convenience, are paternal devices. Health regulations and quarantine are likewise.

A body of mendicants begging for bread or the wherewithal to procure the same, footsore, weary and ragged,

are now within the Capitol boundaries. The Government, while not deeming it proper to confer with this body as representative of any demand of the people, tolerates its presence by providing a place for these pedestrians to camp and giving them police escort, though the unnecessary clubbing of their leaders on the Capitol steps without provocation, cannot be called protection.

Concede that Coxey and his followers are misguided, they are citizens, peaceably assembled, and they represent a class of the discontented element among our people and an interest. The Government of Washington City in extending the hospitality of a camping ground to these citizen pedestrians with a grievance, should have selected at least a healthful spot instead of the two hundred by three hundred feet lot on James Creek without shade and with its numerous decomposing manure piles and foul-smelling sewers, for between four and five hundred men and horses.

This procedure on the part of the Washington authorities menaces the public health, as that of Coxey and his followers threaten the political health and stability of the country.

Surely in the heart of the Washington authorities "there was" (not) "the law of kindness, and on this law they meditate" (not) "day and night."

Here was an unavailed opportunity for this great Government of ours that boasts its asylum for the world's oppressed and through lax laws of naturalization opens its doors wide to the scum of Europe, to show its interest in some of its own unfortunates. A cup of cold water and a little real fresh air might have been given without loss of dignity or the surrender of a principle, to this Commonweal marching contingent of the discontented and disgruntled unemployed, and the grievances of this interest, humble and misguided as we may concede it to be, might have been respectfully heard—not by permitting inflammatory speeches on the steps of the Capitol building, but by a delegated committee from them meeting a committee in the House of Representatives. From a sanitary point of view, social and political, it would have been better if Uncle Sam had received this "army of tramps" with the hospitality of pure air and good water, heard its grievance and allowed it to depart in hope, than to harbor it there as is now being done on unsanitary grounds, to fall sick and die, to grovel and grumble in discontent and bad air in

sight of the Capitol of the "best Government on earth," whose representatives so lately promised these same discontented citizens all they wanted for their votes.

English as "She is Spoke."—The *Medical Record* thus comments on *The Official Journal* of the late Congress at Rome:

The Official Journal was an absurd affair, containing almost no information, and that usually misleading. The English of it was ridiculous and insulting to the members speaking that language, much of it being absolutely unintelligible, and it was only by reading the French or Italian column that one could gather the sense of what the editor meant to convey to his readers.

Professor Virchow's Speech.—The following is the report of Virchow's address at the inaugural session, as given in *The Official Journal* of the following day:

"The Professor Virchow, President of the last Congress, explaine the reasons that have decided the Physicians that in 1890 were reunited at Berlin, to choice Rom, as six of the XIth International Congress.

"The Orator said, that in this manner they have intended to make homage to the ancients tradictions. He exprime the desire that the Congress, can contribute to elevatad the morals aspirations, the ties of the friendship of all countries, so that the fraternal place that must approch all the civilited Nations.

After the conclusion of this address, the *Journal* continues: "Mrs. The Delegates whom names are following, have taken the word in order, to give the welcome to their Compatriots."

Correction.—In our last issue it was stated that the New Hampshire Insane Hospital was visited by a conflagration, but by a reference to our Correspondence Department it will be seen that it was not this asylum, but a county alms house that was burned.

CORRESPONDENCE.

NEW HAMPSHIRE ASYLUM, CONCORD, N. H.,
FEB. 9th, 1894.

Charles H. Hughes, M. D.

Dear Doctor.—In hospital notes of the ALIENIST AND NEUROLOGIST, No. 1, Vol. XV., page 159, I notice you refer to a note as follows: "The recent holocaust of the New Hampshire Insane Hospital." Will you kindly correct that statement in your next issue of the Journal.

The affair to which you refer, and which deserves the comment which you quote from the *New York Times*, occurred at the Strafford County Alms-House, an entirely different institution from the New Hampshire Asylum for the Insane.

The State Hospital for the Insane has never had a conflagration in its fifty years of existence, and it should in no way be confounded with the poorly kept, poorly managed and meager out-buildings called "asylums" at the various county alms-houses.

The medical officers, and the trustees of the New Hampshire Asylum, of which I am superintendent, have always deprecated the county management of the insane.

This matter of a "holocaust," therefore, is a sensitive point with us, and it will oblige me very much if you will, in the next issue, make the correction referred to above. Yours truly, C. P. BANCROFT.

NEW YORK PASTEUR INSTITUTE,
NEW YORK, Feb. 22d, 1894.

Editor of the ALIENIST AND NEUROLOGIST, St. Louis, Mo.

Dear Sir:—I beg to send you herewith the statistics of the New York Pasteur Institute for the year 1893. You will notice that not a single case of hydrophobia has been observed among the eighty-five persons treated, while other persons and animals, bitten at the same time, have died of rabies. I am pleased also to inform you that the 104 persons treated in 1892 have remained well.

Hoping this information may be of some interest,

and eventually of service, to the readers of the ALIENIST AND NEUROLOGIST, I remain,

Yours very truly, PAUL GIBIER.

To the Members of THE AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

The next annual meeting of the American Medico-Psychological Association will convene at the Continental Hotel, in Philadelphia, upon Tuesday, May 15th, 1894, at 10 A. M. As this is the Semi-Centennial of the Association it is fitting that the Fiftieth Annual Meeting should be held in the city which witnessed the first meeting. It also seems proper that a special effort be made to commemorate the event by appropriate historical and commemorative addresses. The Committee of Arrangements accordingly have called for several papers which shall treat briefly but appreciatively of the progress which has been made during the past half-century in hospital architecture and in the care and treatment of insane patients; which shall give a review of the literature of the same period, and which finally shall speak of the men who have contributed to these important changes—whose names and personalities should be recalled to the Association. It is hoped that all members of the Association will arrange to be present, as the occasion promises to be of more than usual interest. The members are earnestly urged to be present at the opening session and to remain until the adjournment.

The following terms have been made with the Continental Hotel: Special rates—$2.50 each per day upon 4th and 5th floors. Regular rates—$3 00 to $4.00 per day upon 1st, 2d and 3d floors. "Parlor C" free for the meetings of the Association if 75 or 100 members are staying in hotel, otherwise $25.00 per day.

The request is also made that all members who desire to present papers shall send their titles as soon as practicable to Dr. H. M. Hurd, Secretary of the Association, care of the Johns Hopkins Hospital, Baltimore.

Members are urgently requested not to occupy more than twenty minutes in reading a paper. If a whole paper cannot be presented in that time, it is suggested that a brief of such parts as may not be read be furnished.

Very respectfully submitted,

HENRY M. HURD, *Secretary.*

Baltimore, Dec. 20th, 1893.

IN MEMORIAM.

Dr. Joseph Workman.—Our dear old friend and collaborator is no more! At the ripe age of four score and nine, in the City of Toronto, in the full possession of his faculties, after a sudden illness, our honorable and learned associate passed quietly to the undiscovered country whither the footsteps of all mankind are tending.

During the day which closed his long life he was in good spirits and kindly mood, and conversed freely with one or two friends who had called to see him.

Dr. Workman was born near Lisburn, County of Antrim, Ireland, on May 26th, 1805, so that in less than six weeks he would have completed his 89th year. His ancestors came from Gloucester, England, to Ireland, during the protectorate of Oliver Cromwell, and the family was given a grant of land in the green isle through the agency of the Protector himself. Young Joseph Workman received the first elements of his subsequent thorough education in a school conducted by an elder brother, Benjamin, at a town named Mullacarten, three miles from Lisburn. In 1826, just when he had reached manhood, he was employed in an ordnance survey of the British Isles. Prior to his birth, in fact shortly after the close of the War of Independence in America, the father of the family and his son Benjamin sailed to Philadelphia, where they remained for three years. The doctor's father was a teacher by profession, and taught English in a college in Philadelphia, which afterwards became the University of Pennsylvania. In a few years he returned to Ireland, and when he died there were nine children in the family, eight sons and one daughter. His mother, who was a Miss Catharine Gowdie, of Scotland, lived to the great age of 104 years. While he was still in the bloom of his manhood, Dr. Workman came to Canada, taking up his residence in Montreal. During his later years he was the oldest living graduate of McGill College, Montreal. In 1836 he came to Toronto. He had been married in Montreal to Miss Elizabeth Wasnidge, of

Sheffield, Eng. In 1840 he became professor of obstetrics and therapeutics, under Dr. Rolph, in the Toronto School of Medicine, and was appointed superintendent of the Toronto Lunatic Asylum in 1853. He remained in the latter position for twenty-six years. He was a member of the City Council of Toronto when a reward was offered for the capture of Mr. William Lyon Mackenzie, and was the first chairman of the city's Public School Board. In after years he was frequently honored with the presidency of provincial and city medical associations. Four or five years ago he was presented, by the Toronto Medical Society, with a portrait in oil of himself, and the picture now hangs in one of the society's rooms. Dr. Workman was an accomplished linguist and translated fluently from five languages.

Readers of this journal are too familiar with his skill in this direction, and with his ability as a clear-headed alienist. To this Journal, the *Journal of Insanity*, and the Canadian medical periodicals, his pen was most partial, but he wrote and translated for many others. He reveled in the literature of the higher neurology, psychiatry and psychology. He was an accomplished historian, medical and political, as well as linguist, and a careful and successful hospital head.

He was a man of unassuming worth, strong and lasting in his attachments, true in his friendship, a lover of the good, the true and the beautiful in science, in art and in morals, and a hater of shallowness, pretense and sham. He reached out a helping hand from a warm heart to the young, struggling, meritorious and ambitious in the profession. Over his bier we acknowledge the early encouragement of his cheering counsel and helpful spirit. He rests from his labors, in the enjoyment of that happy immortality in which he so confidently trusted. Dear friend, we bid thee *au revoir!* but not adieu. Spirits like yours never die, but come betimes to abide with us and help us on our way.

C. E. Brown-Séquard.—The physiological and medical *savant* of two continents is dead. Born in the island of Mauritius, he was educated in Paris and labored for fame and the world's great benefit in London, in Boston, in

New York, in New Orleans, in Paris, dying in the latter city on April 2nd, at the age of seventy-six years. He was honored by prizes from the French Academy of Sciences, the British Royal Society, Royal College of Physicians and Surgeons, and applauded and honored by scientists everywhere. In Boston he was for several years Professor of Physiology and Pathology of the Nervous System in the Howard Medical School (1864 to 1870). After that he was called to France to a position in the School of Medicine at Paris. He returned again in 1873 to New York and founded, with Dr. E. C. Seguin, the *Archives of Medicine.*

He was also at one time chief of the Hospital for the Paralyzed and Epileptic in London. Later he became the successor of the great Claude Bernard, as Professor of Experimental Medicine at the College of France, a post of great honor, which he most worthily filled. He was an indefatigable worker and wielded a fascinating and instructive pen, especially in neurophysiology and neurological medicine.

He was the founder of the *Journale de la Physiologie de le' Homme et des Animaux*, and *Directeur* of the *Archives de Physiologie Normale et Pathologiques* at the time of his death.

The bromide treatment of epilepsy was developed by Brown-Séquard, though it had previously been suggested by an Englishman.

He was the first to galvanize the cranial sympathetic, as Goltz was to galvanize the dorso-pelvic sympathetic system.

His experiments on irritation of the nervous system, reflex irritation, the neural influences over nutrition, secretion, etc., laid the foundation for great physiological advances, these and his treatise on "The Physiology and Pathology of the Nervous System," published in New York, in 1853, and his subsequent contributions to these subjects, contributed largely to the foundation of modern neurology and neuriatry. He demonstrated that decussation of sensory impressions take place in the cord, and not in the brain; that destruction of the gray matter of the cord obliterates sensibility; that its motor tracts are in all except the posterior columns, and many other demonstra-

tions that have since been accepted in explanation of physiological and pathological phenomena.

Brown-Séquard first demonstrated the epileptogenic zone by producing artificial epilepsy in the inferior animals. He, with Claude Bernard proved the power of the vasomotor nervous system over the arterioles, and propounded the doctrine of the transfer of sensibility.

Some of his later teachings are not in harmony with those of former days, which have been accepted as irrefutable facts, and some of his facts tend strongly to confirm the doctrine of vicarious function in psychomotor areas of the brain, a doctrine approached, but not perceived or announced by this distinguished *savant* many years ago, and later repeated in his essays on "Duality of the Brain." Had his mature vigor and the ambition of his youth have abided with him for another decade, he would probably have given the world a supplemental doctrine of vicarious central functions under certain morbid stress, fully in harmony with all the facts, and entirely explanatory of his later teachings, but this is now left for the coming physiologist following in his illustrious footsteps, to accomplish.

He had accumulated facts, as Dr. Shattuck states in the *Boston Medical and Surgical Journal*, which led him to believe that paralysis, anæsthesia, amaurosis, aphasia, and other effects of brain-disease are not dependent on loss of function of either the centers or conductors specially employed in voluntary movements, perception of sensations, power of expression of ideas by speech, etc. He taught that a lesion of any part of the brain may produce any symptom, and that, on the other hand the same symptom may appear, no matter where the seat of lesion may be. A lesion in any part of the brain can produce paralysis, either on the same side or on the opposite side of the body. A paralysis may appear on one side, then on the other side, although the lesion remains in one-half of the brain. As regards vision, facts, according to Brown-Séquard, show that a disease in one-half of the brain can produce hemiopia either in both eyes or one, and in the corresponding or the opposite halves of the retinæ, or a complete amaurosis of either of the two eyes or of both together, so also

anæsthesia, aphasia, loss of consciousness, etc., may arise from lesions in almost any part of the brain. One of the doctrines that he stoutly maintained was this, that the seat of each special function of the brain, instead of being a cluster of cells localized in a small part of the brain is disseminated, so that the cells belonging to each are spread over a considerable extent, if not the whole extent of the brain.

The future physiologist will revise the conclusion of the dead *savant*, and find in a new view of the complex function of the brain, viz., vicarious and alternative function of centers, and groups of psychomotor cells with their neuroglia, under stress of certain morbid implications, an explanation of all the facts.

In the death of Brown-Séquard, the world has lost the most eminent physiologist of the present time. He was the last of a distinguished line, who have made an imperishable impress upon the biological science of the world, men who were both physiologists and physicians. Brown-Séquard showed with Charcot, with Claude Bernard, with Vulpian, Longet, Flourens and Majendie, Schiff, Goltz, Bintz, Munck, Sir Charles Bell, Luciani, Ferrier, Fritz, Hitzig and others, the glory of the marvelous biological discoveries of this century.

Dr. Albert Day, famous for his successful treatment of inebriates, and who, for the past thirty-five years, has been identified with the Washingtonian Home in Boston, died April 27, aged seventy-three.

REVIEWS, BOOK NOTICES, ETC.

THE BLOT UPON THE BRAIN. By W. W. Ireland, M. D., Edinburgh. Bell & Bradfute.

A Reviewer in the *Eastern Daily Press* (Norwich), England, thus refers to the recently revised work of our esteemed contributor:

The name of W. W. Ireland has long been identified with psychological literature, and everything that emanates from his pen is welcome throughout the world as a useful contribution to science, and is sure to be worth reading. The learned author is conspicuous for the versatility of his talent; indeed, he has been described by a foreign reviewer as "the many-sided *litterateur* and author." Sometimes he is engaged in abstruse and serious studies, and at other times his thoughts diverge into the field of historical romance; and we had occasion not long ago to review his penultimate work, "Golden Bullets," a thrilling story in the days of Akber and Elizabeth.

The book before us is a second and enlarged edition of a work which excited much attention in the literary world a few years since; and which in its present and improved form is calculated to interest not only the psychologist, but the philosopher, the politician, the philanthropist, and the general reader.

Passing over the first three chapters, which treat of hallucinations as exhibited in the persons of Mahomed, Luther, Joan of Arc, and others, we are principally concerned with that section of the work which treats of the "Insanity of Power," a subject well worthy of the consideration of the politicians of the 19th century. In the three remarkable chapters devoted to this subject, Dr. Ireland soberly and temperately describes the debasing effects of unchecked power, as illustrated by the early Roman Emperors, and by the despotic Romanoffs of Russia.

In speaking of the influence of despotic power on the individual who wields it, our author says: "The effect of such a situation upon the character must be interesting to the student of human nature. The man whose every whim is gratified by the ready servility of others is in a position very dangerous to his own mental advancement. By satisfying every desire, his appetite is increased; by continually gratifying his appetite, his will is enfeebled; by never disputing his opinion, or correcting his errors, his judgment is deranged. The flatterers fan his most languid caprices into a glow. His selfishness is continually nourished by the eager sacrifices made to his half-formed wishes, and the rights of other men appear of no account. Unrestrained power always tends toward abuse, indeed, save to some rare and fine natures, the luxury of power consists in its abuse." In further considering the "Insanity of Power," our author says we may look at it in two ways, "the madness of the tyrant in abusing it, and the madness of the people

in submitting to it," and he illustrates this view by alluding to Ivan the Terrible of Russia, the Imperial monster of the 16th century, whose career was that of an unrestrained madman, who for twenty-six years yielded without remorse to his homicidal impulses and cruellest fancies; indulging without stint his worst passions and vilest propensities amongst a coarse and servile race. Ivan used to keep bears, which he now and then let loose upon the people for sport. Husbands or children were fastened dead to the places which they had occupied at the domestic table, and their wives or mothers were compelled to sit for days opposite to the dear and lifeless remains. These seem to have been halcyon days for tyrants. They had no County Councils to control expenditure, and no troublesome Parliamentary representatives to ask ugly and inconvenient questions; in fact the population seem to have readily submitted to the most barbarous atrocities, for when Ivan cut off the ear of a nobleman who came to pay his respects to him, the poor sufferer, repressing all sign of pain, thanked the Tsar for his gracious pleasantry, and wished him a prosperous reign! Such was the servility of the Russian people, and their awe of their tyrannical monarchs, that they actually bewailed Ivan's death! Unlike their descendants of to-day, their patience had no limits, for they regarded the rule of the Tsar as the rule of God, and held all contradiction as a transgression of his law. Dr. Ireland, after describing the tyranny of Ivan's successors, pronounces them as the subjects of the "Insanity of Power," and he adds that "hereditary despotism like that of Russia would fain hush the warnings of the past." It seems that the present Russian Emperor does not relish the plain outspoken truths of Dr. Ireland, for although his remarks have no political animus and are confined to matters of history, the book has been excluded from the Russian dominions! The author, however, adds that the autocrat's ukases have no control over the laws of heredity.

After perusing this interesting volume, the reflection forces itself upon our minds, that some future psychological historian will probably speak of the present Russian autocrat, and possibly also of his Imperial brother of Berlin, as "noble savages," who retard the civilization of the world, and whose existence is an anachronism in the broad daylight of the 19th century; for they, like some of their mediæval predecessors, seem tainted with the "Insanity of Power," for although justly credited with being irreproachable in their domestic life, they pin their faith to a large standing army, by which, at their beck and call, thousands of their fellow creatures are hurried into eternity.

What a contrast to this state of things is furnished by the noble example set by the two English-speaking nations, who twice during the last quarter of a century have agreed to settle their disputes by arbitration. All honor to the Anglo-Saxon race for this noble protest against the illogical appeal to physical force, the result of which is just as likely to be in favor of the wrong side as the right. The *mitrailleuse*, the needle gun, the monster cannons, and other deadly weapons may do

their infernal work and may hurry off thousands of human beings from this earthly stage, and Victory—so-called Glory—may be the lot of one of the contending parties; but to the eye of the philosopher and of the philanthropist, all this is only the triumph of physical force—it may be the triumph of might against right. Fortunately, in the last decade of this century, there is a widespread feeling that opportunities should be given for studying those means and appliances by which human life can be prolonged, not destroyed; and we trust the time is not far distant when all European nations will be able to apply to themselves the words which we have seen written in letters of gold on the walls of a celebrated foreign university:

> Ad cædes hominum prisca amphitheatra patebant
> Ut longum discant vivere, nostra patent.

The most recent of Dr. Ireland's productions, "The Blot upon the Brain," is written in a tone and spirit calculated to bring about the above happy result; it displays in an eminent degree, the author's literary culture and scholarship, and we heartily recommend it as one of the most interesting and instructive books that have recently come under our notice. F. B.

A Primer of Psychology and Mental Diseases. By C. B. Burr, M. D., Medical Superintendent of the Eastern Michigan Asylum, Detroit. George S. Davis. 1894.

Nothing is more significant of the advances made in the care of the insane than the development of the "hospital idea" in those institutions designed for this class of afflicted. In keeping with this hospital idea has sprung the necessity for training schools for asylum attendants. It was from the difficulties encountered by the author in carrying on his work in teaching his attendants something about mental disease, and in instilling principles for a scientific care of their patients, that this little book has had its origin.

Part I. deals with those elementary principles of moral psychology which are essential to a clear comprehension of phenomena manifested in the workings of the insane mind. The subject is presented in an exceptionally succinct and lucid manner, and in its development leads the reader logically to the study of what follows.

Part II. deals with *Insanity*. In the few pages devoted to the causation of insanity, the author has included all that is essential, and has at the same time placed this part of the subject on a more scientific basis than is usually met with in works more pretentious. The forms of insanity are taken up in order, and their symptoms briefly analyzed, with a special reference to "the individual's normal standard of thinking, feeling and acting," so lucidly set forth in Part I.

In Part III. we come to "Management of Cases of Insanity." While this is directed chiefly to asylum attendants, it cannot but be of the greatest service to any who are called upon to care for those disordered in mind. The subject is handled in a style that is captivating and with a

comprehensiveness born of years of practical experience in caring for the insane.

The book represents work in a field not before cultivated, and will prove a valuable help to the student in medicine, and to the busy general practitioner, as well as to the asylum attendant and to those asylum physicians who are carrying on work in training schools. C.

THE DISEASES OF PERSONALITY. By Th. Ribot, Professor of Comparative and Experimental Psychology in the College de France. Authorized translation. Paper. 157 pages. Chicago: The Open Court Publishing Co. 1894. Price 25 cts.

The book treats of organic and emotional disorders; disorders of the intellect and dissolution of personality. The author seeks to prove that "the organism and the brain as its highest representation, constitute the real personality, containing in itself all that we have been, and the possibilities of all that we shall be."

"The complete individual character is inscribed there with all its active and passive aptitudes, sympathies and antipathies, its genius, talents, or stupidity; its virtues, vices, torpor or activity. Of all these, what emerges and actually reaches consciousness is only a small item compared with what remains buried below albeit still active. Conscious personality is always but a feeble portion of physical personality."

ÉTAT MENTAL DES HYSTERIQUES LES STIGMATES MENTAUX. Par Pierre Janet, Professeur agrége de philosophie au Collège Rollin, Docteur es lettres, etc. Rueff et Cie, Editeurs, 106 Boulevard Saint Germain, Paris.

This valuable *brochure* starts with the proposition of Briquet, *traite de "l'hysterie*, that hysteria is a general disease which modifies the entire organism," and maintains that it is an affection of nutrition and of all the physiological functions; an involvement, also, of the mental functions, which are phenomena of organism.

On these lines the author writes, and the clinical pictures he portrays are true to nature and the reflex of extensive observation. Any physician familiar with the French language will derive great profit and pleasure from reading this compact and highly meritorious contribution to the clinical literature of this most remarkable disease.

THE LITERARY DIGEST.—In *The Literary Digest* for March 29th there were forty-five magazines represented: American, English, Canadian, German, French, Dutch, Spanish and Russian. There were forty-one daily and weekly papers, some of them from the Japanese, Chinese, South African, also from India, Hawaii and New Zealand.

In the *Digest* of April 5th are notable articles on nearly every living topic of general interest, from all over the world. The translations and condensations are made especially for it by its regular editorial staff. The number is fully illustrated.

Russell's Art Collection.—The Russell Art Publishing Co., of 928 Arch Street, Philadelphia, desire the names and addresses of a few people in every town who are interested in works of art, and to secure them they offer to send *free*, "Cupid Guides the Boat," a superbly executed water color picture, size 10x13 inches, suitable for framing, and sixteen other pictures about same size, *in colors*, to anyone sending them *at once* the names and addresses of ten persons (admirers of fine pictures) together with six two-cent stamps to cover expense of mailing, etc. The regular price of these pictures is $1.00, but they can all be secured free by any person forwarding the names and stamps *promptly*.

Note.—The editor of this Journal has already received copies of above pictures and considers them really "Gems of Art."

Bayou Folk. By Kate Chopin.—This is a charming *brochure*, illustrative of Southern life, by a charming and accomplished writer, of St. Louis. Though "Bayou Folk" is the title of the book the volume is really an aggregation of entertaining personal histories of Louisiana people, adroitly blended into one volume by the gifted authoress, cleverly and naturally showing the home life and dialect of the Pelican State. Lovers of such reminiscences will find much to charm and to admire in this book. Cleverly, tranquilly and sweetly it carries the "Southron" back to Dixie in the days of the war and before; and the Creole dialect, as portrayed in the book, is as natural as if it had been written by a native, and we should not be surprised if it had.

The Medical Mirror for October is received, and is one of the brightest of the bright series of that bright journal. Dr. I. N. Love, its proprietor and editor, has solved the problem of how to make a scientific medical journal attractive. His journal is as fascinating as a romance, as attractive as a literary magazine, and as brilliant as its name would indicate. Dr. Love is a success and so is his journal.

This is the way an exchange talks of our talented contemporary.

Improved R. R. Surgeon's Report Blank (P. Blakiston, Son & Co.'s, Philadelphia) is an ingenious time-saver and remembrancer combined, to the busy surgeon. It would be of excellent service, likewise, to the Army Medical Staff in time of war, and to both Army and Civil practitioners for case record purposes.

Haig's Uric Acid is a work which we commend to all of our readers. It will be noticed *in extenso* in our next issue, having come to hand too late for full review in this. J. & A. Churchill, 11 New Burlington Street, London, W., are the publishers. Price, 10 shillings and 6 pence.

A Case of Acute Suppuration of the Middle Ear, Accompanied by Cone-Shaped Bulging of the Membrana Tympani. By Boerne Bettman, M. D., of Chicago, Professor of Ophthalmology and Otology in the College of Physicians and Surgeons, etc.

Belladonna; a Study of Its History, Action and Uses in Medicine. Illustrated. Translations, Abstracts and Therapeutic Index from leading Authors Edited by F. B. Kilmer. Johnson & Johnson, publishers.

The Importance of Employing Anæsthesia in the Diagnosis of Intra-Pelvic Gynecological Conditions, Demonstrated by an Analysis of 240 Cases. By Hunter Robb, M. D., Baltimore.

An Uncommon Sequela of an Intra-Nasal Operation. By M. D. Lederman, M. D., of New, York, Assistant to the Chair of Larnygology and Rhinology, New York Polyclinic, etc.

The Etiology of Osseous Deformities of the Head, Face, Jaws and Teeth. By Eugene S. Talbot, M. D., D. D. S. The W. T. Keener Co., Chicago, Ill., publishers.

Bilateral Cerebral Thrombosis Due to Syphilitic Arteritis, with Incontinence of the Vesical and Anal Sphincters. By J. T. Eskridge, M. D., Denver, Col.

Gonorrheal Irido-Choroiditis. By Charles Stedman Bull, M. D., of New York, Professor of Ophthalmology in the University of the City of New York, etc.

Review of Recent Advances in our Knowledge of the Anatomy and Physiology of the Nervous System. By John Punton, M. D., Kansas City, Mo.

Neurasthenia—From the Stand-point of the General Practitioner. By I. N. Love, M. D., St. Louis.

The Absorption of Immature Cataract, with Restoration of Vision. By J. Hobart Egbert, A. M., M. D., Ph. D., Holyoke, Mass.

Hysterical Tremor and Hysterical Anorexia (Anorexia Nervosa) of a Severe Type. By James Hendrie Lloyd, A. M., M. D.

Report of a Case of Acromegaly, with Brief Comments on this Disorder. By Charles W. Dulles, M. D., Philadelphia.

Modern Homeopathy; its Absurdities and Inconsistencies. By Wm. W. Browning, A. B., LL. B., M. D., Brooklyn, N. Y.

Establishing a New Method of Artificial Respiration in Asphyxia Neonatorum. By J. Harvie Dew, M. D., New York.

Hydrophobia in the United States, with Suggestions as to Treatment. By Charles W. Dulles, M. D., Philadelphia.

Laryngeal Papillomata in Children. A Clinical Lecture delivered at Gross Medical College. By Robert Levy, M. D., Denver.

Maintenance of an Aseptic Technique in Gynecological Operations Outside of Hospitals. By Hunter Robb, M. D.

A Splint for Fractures and Luxations at the Elbow-Joint. By Charles W. Dulles, M. D., Philadelphia.

Some Reasons for the Performance of Circumcision on All Male Infants. By Alex. L. Hodgdon, M. D.

Etiology of Pelvic Diseases in Women and Their Prophylaxis. By X. O. Werder, M. D., Pittsburgh, Pa.

The Present Status of the Treatment of Uterine Fibroids. By X. O. Werder, M. D., Pittsburgh, Pa.

Current Fallacies About "Nervous Prostration." By Ludwig Bremer, M. D., St. Louis, Mo.

Lymphostasis, a Rehabilitation of Chronic Rheumatism. By Hans Froelich, M. D., St. Louis.

The Modern Crank and Mental Responsibility. By John Punton, M. D., Kansas City, Mo.

Sarcoma of the Kidney; its Operative Treatment. By Robert Abbe, M. D., of New York.

A New Spigot Attachment to Facilitate Asepsis. By Hunter Robb, M. D., of Baltimore.

Importance to the Surgeon of a Bacteriological Training. By Hunter Robb, M. D.

Zur Lehre der syphilitischen Spinalparalyse von Erb. Von Prof. P. Kowalewsky.

The Practical Application of Trusses. By C. H. Guibor, M. D., Topeka, Kas.

Obscure Forms of Gout. By Charles W. Dulles, M. D., Philadelphia.

The Cause and Cure of Malignancy. By William Thornton, Boston, Mass.

Arthropathy in General Paresis. By James Hendrie Lloyd, A. M., M. D.

Tumor of the Cerebellum. By J. T. Eskridge, M. D., Denver, Col.

The Pathology of Locomotor Ataxy. By Sydney Kuh, M. D.

Inoperable Sarcoma of the Nose. By Robert Levy, M. D.

THE

Alienist and Neurologist.

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ORIGINAL CONTRIBUTIONS.

The Nervous System in Disease and the Practice of Medicine from a Neurological Stand-point.*

MEDICAL PROGRESS. PROGNOSTICATIONS OF THE FUTURE OF MEDICINE.

By C. H. HUGHES, M. D., St. Louis.

IN this age of pre-eminent progress in every department of human research and endeavor, I congratulate you on the onward march Medicine has made and is yet making towards its glorious goal—the mitigation of human misery and the mastery of disease, and especially do I congratulate you on the part American Medicine has taken in the scientific triumphs of the closing century over the encompassing elements and environment adverse to man's health and strength and consequent happiness and efficiency in the affairs of life. If we look back over the passing century for only a few decades, at her contributions to the welfare of man, we find she has given more than her full quota to the common fund of human happiness. She has made physical and psychical tranquillity and power, happiness and length of days, possible to man under the strain and

* Address on Medicine. Read before the American Medical Association, at San Francisco, June 6th, 1894.

pressure of modern progress. She has searched out and is searching out the causes which are inimical to, or promotive of, man's strength in the battle of life. She teaches him how to evade the one and to utilize the other in power of mind and body.

As our ancient father Hippocrates drove the devotees of superstition from the temple of Hygeia, and taught the people that offended gods could neither bring, nor propitiated gods dispel disease, and was an example of medical hygiene in his own longevity, far beyond that of any man of his time, and as that later devotee of Æsculapius, Andreas Vesalius, defied the popular prejudice and ecclesiastical power of his day at the risk of his own life, to make his first human dissection (and whose unfortunate untimely death the world has never ceased to deplore), so we, his professional descendants, continue to this day, breaking down and ignoring the barriers of ignorance, of prejudice and superstition that have stood or now stand in the way of man's happiness and prosperity, unlocking the secrets of nature's *arcanum* and setting the captive mind and organism free from the enthrallment of disease and the gloom of untimely death.

Substitutive inoculations, beginning with the triumph of vaccinia, for establishing tolerance and immunity from other violent diseases, are spreading the rescuing power and glory of Medicine as an art preventive, and the names of Jenner and Pasteur are now immortal. The "great white plague," consumption, with its 165,000 annual victims, in this country alone, will soon be a thing of the past, through wisely applied antisepsis. Medicine is now the great art preservative and art preventive of the world.

Electroscopic explorations now penetrate the dark and otherwise hidden places of the human body, making it a glow of light to the diagnostician, while other diagnostic means, electric, physical, chemical, dynamometric, æsthesiometric, thermometric, ophthalmoscopic, laryngo-pharyngoscopic, otoscopic, microscopic, spectroscopic,

oncographic, sphygmographic, auditory, percussional and tactile diagnosis and urinalysis, come to the aid of the modern physician in searching out disease. What would our painstaking fathers in the profession have given to have seen this day of accurate methods of determining the existence, and place and boundaries and prognosis of morbid conditions. By these means, no viscus and no system of the body escapes the search-light of modern medical diagnosis.

With these aids at our command, but little, if any, of the human anatomy in health or disease is absolutely beyond the reach of our science, and scarce any part beyond some relief from the multiple resources of medical art. That *noli me tangere* of our ancestors, the abdominal cavity, is no longer a *terra incognita* to the resources of surgery, thanks to Wm. Lister, of London; McDowell, of Kentucky; Battey, of Georgia; Gross, Frank Hamilton, John T. Hodgen and Bowditch. The once-hidden recesses of the brain also are now with impunity penetrated to where our ancestors dared not go, saving lives and minds formerly doomed to destruction, thanks to Fritsch and Hitzig, of Germany, Ferrier, Horsley and McEwen, of England and Bartholow, of America, the latter having been the first physician in the world to explore and prove the truth of cerebral localization by demonstrations on the living human brain.

With judicious neuriatric counsel, profound anatomical knowledge, and skillful surgery, science now penetrates to the very dwelling-place of thought and volitional motor impulses in the cerebral cortex, enabling perishing victims to be saved by the helping hand of modern neurology and cerebral surgery.

Thus does medical science move majestically onward in her benefactions, and man, her beneficiary, moves forward to his higher destiny, under her benovolent ministrations.

I could not in the time allotted to this address give

even an outline of general medical progress in our day, and I presume it is more appropriate and really expected that I should make an address more in the line of my special observation. Accordingly, since general practice is advanced by light from every quarter, I ask your attention to Points in the Practice of Medicine from the Stand-point of a Neurologist.

La Grippe, a Toxic Neurosis.—I begin with that discomforting, distressing, disastrous and often fatal malady, *La Grippe*. A disease with which all of us have become painfully familiar; a malady whose insidious destructiveness has not been properly appreciated by either the public or the profession; a disease which has been laughed at and sneezed at by doctor and patient, even while death was stealthily approaching to claim the unapprehensive victim; a disease whose nervous sequences, where death has not intercepted them, have been astonishingly various and grave. I discuss chiefly the neuropathic aspects and *sequelæ* of this disease. It is, in my judgment, a toxic neurosis, in its early stage a nervous fever, its later symptoms depending on the centers specially touched by its toxine.

Notwithstanding the warnings and apprehensions early aroused in the minds of a few clinicians of keen observation, the gravity of the grip, especially in its toxic neuropathic sequence, is only just beginning to be generally recognized, though many months have elapsed since Julius Althaus, Symes Thompson and W. R. Gowers, of London; Chas. K. Mills, of Philadelphia; myself and other writers, first called attention, since the appearance of the late epidemics, to this now clearly demonstrable fact. And long before these, in former epidemics, Theophilus Thompson (the father of Symes), and Graves, Blakiston and Peacock, had noted the prominence of the nervous symptoms, especially evidences of vagus implications. Its possible fatality in certain familiar forms is now, after a larger clinical experience, much more generally apprehended and

dreaded by the profession, especially since the publication of the *post-mortem* findings of Kusskow, of St. Petersburgh, in forty cases, and the fatal results in isolated instances reported in the journals from different sources.

Kusskow's *post-mortems* showed hemorrhagic and pyæmic or septico-pyæmic results as the two forms, with purulent and gangrenous inflammation of lung tissues and frequent metastasis to other organs. Hemorrhages and hematomas in the muscular tissue, parenchymatous bleedings and bleedings by diapedesis, pachymeningitis hemorrhagica interna, in one case. In fifty per cent. of the cases, hyperæmia of the pia, also meningeal infiltration and suppurative meningitis and hemorrhage into the lateral ventricle, and very frequently lobar pneumonia. The heart muscle was soft, friable and anæmic.

Peritonitis was never discovered. The kidneys were found to be usually affected, the spleen contracted, the intestinal canal was unchanged. Calcification was found in the muscle cells similar to those found in typhoid lesions of the bowels, venous thrombosis more often than arterial, besides the often described pharyngo-laryngeal infiltration. As the hemorrhages were inavariably unilateral, the author concludes that the lesion involves the sympathetic centers.

But these fatal endings are but little more serious than some of the results of the invasion of this disease into the region of the cerebrum, middle ear, meningeal and brain inflammation and softening, and the issue of insanity.

I have known of several cases of insanity, profound melancholia, abscess of the brain, general neuritis, facial and sciatic neuralgia and fatal paralysis (one hemiplegic), but most of the vagus in this disease and its more chronic *sequelæ* are largely neural. The heart failure mentioned by Wilks, and seen perhaps by most of us to end life in influenza, is also due to involvement of the vagus center in the medulla, as in so-called *grippe* pneumonia, which accounts for the rapid fatality of lung implication

in *grippe*, and this heart failure also causes emboli and their consequences. This vagus center involvement accounts for "the great and alarming prostration and cardiac weakness out of all proportion to the intensity of the fever" noted by the authorities. And those other "striking features" likewise referred to, "delirium," the great nervous manifestations, headache, pain in the back and limbs and unbearable aching and soreness like the dengue fever misery, point also to the nervous system. This, with the meningitis with which the pneumonia is associated, the neuritis and the mental disorders, disinclination to mental effort, melancholia and insanity which follow, as well as the numerous paralyses resulting, some of which, as already noted, terminate life, point plainly to the part the nervous system plays in revealing the presence of this peculiar and rapidly traveling poison of the air, which could spread from St. Petersburgh to St. Louis in the short space of a few months. It is a mistake, therefore, and in the light of lately recorded experience and in that of my own limited observation, to say that "in the delicate and aged alone do we see fatal results," and it is a further mistake to attribute such results, when they do occur, "only to the intensity of the fever," as one of our most gifted and brilliant authors* has done. His profound clinical acumen compels him, however, to add "profound depression." The profound depression and the feeble intermittent pulse reveal to the neurologist the pathic power of this poison in its attack upon the vital nervous centers, and the bronchitis and the pneumonia, the swelled pharyngo-laryngeal mucous membranes, the middle ear and Eustachian catarrh, coryza, intestinal catarrh and the nephritis, even, are no antagonizing exceptions, nor does the occasional finding of pneumococci invalidate this neuropathic view. They are seldom found in the *grippe* and more often elsewhere.

The grip pneumonia, which is one of its most characteristic and fatal symptoms, is such as might come

* Wm. Osler, "Practice of Medicine," 1892.

from section of the vagi, and a study of the origin and many distributions and functions of these nerves, pulmonary, cardiac, etc., gives us lucid explanation of the phenomena of the disease not otherwise so readily understood. The vagus largely governs the lungs, the heart, and the circulation in this disease, and toxic irritation and depression of the medulla and pons explain most of the symptoms of *La Grippe.* Section of both vagi above the origin of the superior laryngeal nerves is followed by loss of power in the muscles of the larynx, as well as of sensibility in larynx, trachea, bronchi and lungs. The reflex act of coughing is abolished, the glottis does not close, food and foreign bodies, saliva and irrespirable gases get into the respiratory passages and cause inflammation. This was shown as far back as 1740 by Valsalva and Morgagni; also by Langallois in 1812. This has been confirmed so often since that no one now disputes it. The vessels of the lungs become surcharged with blood, owing to the labored and difficult respiration and the long distension of the lungs between inspiration and expiration, serous exudation and pulmonary œdema follow, blood exudes and pus forms in the air vesicles and a probable paralysis of the pulmonary vasomotor nervous system takes place to add to the pulmonary engorgement through the capillary system of the lungs. The pneumonia which takes place immediately after section of the vagi was found by Michaelson, according to Landois and Sterling, to be in the lower and middle lobes; the pneumonia following section of the recurrent nerves is shown more slowly in catarrhal inflammation of the upper lobes especially. Rabbits die with symptoms of pneumonia from section of the vagus. They may live for several days, if the recurrents only are cut. Dogs live longer. If the ninth, tenth and twelfth nerves are torn out from one side in a rabbit, death also takes place from pneumonia, according to Grünhagen.

In birds the upper larynx remains closed firmly and death does not take place for eight or ten days, and

then with symptoms of inanition and fatty degeneration of the heart. The heart shows cloudy swelling and wax-like degeneration. Frogs die of asphyxia under the same circumstances. Some fibers of the vagus seem to exert a trophic influence over the lungs and heart.

Unilateral section of the vagus in rabbits is followed within forty-eight hours by the appearance of yellowish-white spots in the myocardium, especially near the interventricular septum; on the papillary muscles and along the furrows of the coronary arteries. The muscular fibers exhibit retrogressive changes whereby their striæ disappear; they become swollen and filled with albuminous granules. After eight or ten days the interstitial tissue of these foci becomes infiltrated with small round granular cells, especially near the blood-vessels. At a later stage the interstitial connective tissue increases in amount and the muscle atrophies. No effect is produced by section of the depressor or sympathetic fibers, and Fantino thus concludes that some of the fibers of the vagus exert a trophic influence on the myocardium. The same fact is not so nearly demonstrable in regard to the lungs, but it is equally inferable.

The pulmonary branches of the vagus supply motor and sensory (cough exciting) branches to the whole bronchial system of the lungs (the pulmonary vessels being supplied with vasomotor nerves) from the sympathetic system.

They send afferent fibers to diminish, under stimulation, the activity of vasomotor centers, and thus cause a fall of the blood-pressure during forced expiration, and similar fibers to act on the inhibitory centers of the heart, and thus accelerate the heart's contractions. Simultaneous stimulation of these two sets of fibers alters the pulmonary rhythm.

The vagi also contain afferent fibers which go from the pulmonary parenchyma to the medulla, which are continually in action, stimulating the respiratory center. Consequently, section of the vagi deepens the respirations

and diminishes their frequency. Stimulation of the central end of the vagus also accelerates the respirations. Labored and difficult respiration may occur either when these fibers, which excite the respiratory center reflexly, are cut off, or acting centripetally to afferent impulses proceeding upward in the vagus. Conditions determining pneumonia may therefore exist in the nervous mechanism of the lungs and in its points of origin in the cord and superimposed medulla oblongata. If the trunk of one vagus or its center is paralyzed respirations are labored, deep and slow, such as follow section of both. Stimulation of the cardiac branches of the vagus may cause temporary suspension of the cardiac contractions, a feeling of great depression and of impending dissolution, such as we see sometimes in *grippe*, and as we see in dyspeptic asthma and the abdominal frog-tapping experiment of Goltz.

It would be interesting, but too tedious at this time, to further follow this wandering and widely connected nerve, and note its relation and that of its near neighbor nerves, which originate in the fourth ventricle.

All that we have thus far said has just warrant in the recorded and accepted facts of neural physiology, and the careful clinician will not fail to note their significance, and much more by study of the physiology of the other nerves whose nuclei originate in the fourth ventricle, and this nerve center when touched with its peculiar toxine in its bearing on the symptomatology of *la grippe*.

The therapeutic lesson of the neuropathic implications of influenza is rest and reconstruction (pending the search after its causative bacteria and their proper bactericide), rest and reconstruction, that phagocytosis may be promoted in the blood, chloral as the best antiseptic hypnotic and calmative, for even the delirious stage. In the latter, ammonium bromidum added. For the pain, the coal-tar derivative analgesics, and sweat-producing opiate combinations, the elimination of all disturbers and

depressors of nerve centers entering through the blood, like the rheumatic and malarial or venereal poison.

Influenza greatly weakens the *vis medicatrix* of the nervous centers, permits latent tendencies and slumbering diseases to spring into active force and leaves the patient after the active febrile stage has passed and after what is erroneously regarded as the stage of convalescence sets in, in a state of profound neurasthenia or toxic neuratrophia, from which spring many ills. It will develop into mischievous activity a latent rheumatism, gout, neuralgia, malaria or syphilis. We may expect to combat every morbid tendency the patient is prone to, before we have entirely cured him of this malady. These latent morbid aptitudes so brought into renewed activity seriously complicate *la grippe* and embarrass prognosis. These should be appropriately combated, to leave nature as unembarrassed as may be possible, to contend with the devastating foe. And because of the gravity of the nerve prostration and of the nervous *sequelæ*, the patient should be put to bed and kept there till the fever storm is over, and in the house much longer, in order to conserve the fighting energy of the assaulted nerve centers.

This injunction should be as imperative in many cases of *grippe*, as it should be in cholera, for influenza is a far graver malady in its immediate and especially remote effects on the nervous system than it at first sight appears.

DYSPEPSIA AS A BRAIN DISEASE.

What is true of the neural relations of *grippe* is largely true of those of dyspepsia, a disease, which, as Amariah Brigham, an American physician, was the first to show, about 1840, usually has its origin in the brain, as I have elsewhere attempted more elaborately than I shall do at this time, to establish.

I shall only ask you here to consider it as a possible brain affection from what we know of its causes, those in whom it usually exists and the conditions of mind, occu-

pation and environment of those in whom we find it most often manifest.

Dyspepsia belongs to the brain working, brain worrying and nerve-tone exhausting class, to those who bother their brains and eat little or not overmuch, rather than to those especially who gormandize, to those who burn the midnight oil in severe study, whether they do not sleep from fret and worry or from carking care. It belongs to men of affairs and women of care, to the infelicitous and the disappointed in hope and ambition, whose cerebro-spinal systems are inordinately strained and inadequately repaired in life's battle, so that their lower corporeal functions suffer from defective innervation of the viscera concerned in the maintenance of organic life and whose cerebro-spinal systems consequently reciprocally suffer from defective appropriating power and inadequate nutrition, but starvation alone seldom develops dyspepsia.

It is through the neural connections of the brain and stomach that the acknowledged apepsia nervosa of neurology is a clinical fact. It is thus also that, the relationship of nausea to migrane as the concomitant of the latter, but so long considered the cause, is explained, and conversely, that we understand *vertigo e stomacho laeso*, as first described and explained by that great master in medicine, Trousseau.

The brain influences the stomach and the stomach influences the brain, but the power of the former over the latter is far greater then the latter over the former in chronic conditions.

Great brain and nerve strain, as in insanity, brittles the bones; grief and fright blanch the hair and face; fear paralyzes the heart, depresses temperature, causes excessive and clammy perspiration; anxiety arrests secretions and shrivels the skin; remorse wastes away the body; anger flushes the face, and so fills the brain with blood that its vessels burst and the victim falls with apoplexy; shame flushes the cheek, slows the heart and respirations; sorrow shows itself in tears; love and good fortune

brighten the countenance and quicken the step and pulse and lift up the form, while adversity and remorse sadden the face, slow the pulse, bend the form and depress the bodily movements. These things and many needless to mention, show us the potency of mental influence, through its proper neural channels, on the movements of the organism. We cannot deny them in regard to the stomach. On the contrary, as we see the systole of the heart arrested by emotion, so we see digestion stayed by disagreeable and depressing thought. Mental force, through psycho-neural media, pervades the body and the stomach is not exempt from its invigorating or depressing influence over its physiological functions.

To concede this influence of the nervous system over the digestive processes, we need not ignore any fact of chemico-biological research, nor shut out any of the light thrown on the subject by the distinguished American investigator, Beaumont, and those who have followed him in elucidating the functions of the stomach. On the contrary, Beaumont's investigations proved the power of mental states over the digestive processes of Alexis St. Martin.

The liver, the kidneys, the bladder and the bowels are similarly influenced by emotion and the lymphatic system is likewise under nervous control like the arterioles, by the vasomotors.

A center in the medulla also influences through the chorda tympani nerve and probably the sympathetic, the salivary secretion. A center there also influences the action of the kidneys. The chorda tympani contains secretory and vaso-dilator fibers, the sympathetic, vaso-secretory and vaso-dilator. Salivary secretion is induced reflexly by mastication and the irritation of the presence of food in the mouth and stomach and by the vivid remembrance of certain foods whose eating has made an agreeable impression, and by emotion.

We swallow, we digest, we sob and vomit by means of vagus fibers, and its fibers go to the cœliac plexus,

the spleen, the liver, the kidneys and the small intestine. Œsophagismus, gastrodydia, or cardialgia, tachycardia, palpitation and angina pectoris, and intestines, liver and kidneys, are influenced by this wonderful nerve, as well as asthma and exophthalmic goiter and many affections of larynx and lower air passages, nothwithstanding the complete pathology of this wonderful nerve and of many of the interesting diseases connected with it, may be said to be yet somewhat obscure.

The vagus and the vasomotors influence, or govern circulation, respiration and digestion.

Some of the vasomotor ataxias, quite familiar to practicing neurologists who have opportunity for general medical observation, have been noticed and given a clinical grouping under the tenor "Vasomotor Ataxia," by J. Solis-Cohen (*American Journal of the Medical Sciences*).*

The dominion of the nervous system over the spleen is also evident. This fact is one of the concessions of the physiology of our day. Stimulation of the medulla leads to contraction of this organ. Not only its arteries but the organ as a whole is maintained in a state of tonic contraction to a certain extent through the agency of the nervous system.

Physiologists now maintain that its metabolism is controlled directly by the nervous system and they are far nearer than formerly to an understanding of its function, just as the same system is concerned in the bilious and glycogenic functions of the liver as we see demonstrated in the fourth ventricle puncture proof of artificial glycosuria, and exsection of the pancreas has resulted in glycosuria influencing the nervous system as profoundly as thyroidectomy. The spleen may be diminished in size either generally by the stimulation of one of the afferent nerves, and, locally, by direct application of the electrodes to

* This is just such an observation as should come more frequently from general practitioners. The vasomotor nervous system is omnipresent in its organism. It follows the vascular system to the innermost recesses of the body, and the number of its morbific functional possibilities is beyond computation.

the surface of the organ. And Paul Gibier has produced glycosuria by psychical excitation of animals.*

Hysteria.—No better or more familiar illustration of the possible potential relation of the nervous system to disease need be mentioned before a body of practical clinicians than that of hysteria and its neural peculiarities and associated functional disturbance of organs (that mimic of all diseases with its protean features in so many instances), its atrophies, paralyses, contractures, alternating anæsthesias, hyperæsthesias and paræsthesias, aphasias, aphonias, dysphagias, stigmata, emeses, suppressions, excesses and perversions of excretions, nutritional, sensory, motor, psychical, visual, tactile, auditory and emotional derangements.

Hysteria illustrates in an especially forcible manner from the stand-point of clinical observation how suddenly and how extensively nearly all the organs of the body may be profoundly disordered in function by morbid impression through the nervous system and these pathological impressions often repeated and prolonged do sometimes develop actual and enduring organic diseases.

There is a suggestive practical lesson in this "neuromimesis" or mimic neurosis, as to the relation of the nervous system to diseases in general. As the study of this disease led Goodell to discern and portray the nerve counterfeits of uterine disease and to say, "The crying error of the day is the mistaking of nerve disease for womb disease," so I say of disease in general, the crying error of the day is the ignoring of neuropathic implications, concomitants and sequences of organic, visceral and general diseases, and the mistaking of nervous for other diseases.

As any organ of the body may fail functionally and be perverted in the performance of its functions so may we have organic derangements from frequent repetitions of functional disorder, if the trophic and vasomotor nerve centers share in the functional disturbance.

* *Vide* Trans. N. Y. Acad. Med., 1893.

THE TROPHO-NEUROSES.

Here we enter the clinical domain of the tropho and vasomotor neuroses whose name is legion from the symmetrical gangrene and local asphyxias of Raynaud's disease to the ecchymoses, etc., pigment hypertrophies, cornifications, nævi, pigment atrophies (lepra, vitiligo, etc.), arthritic atrophies, climacteric and menstrual cutaneous swellings, etc., urticaria, angioneurotic œdema, the night palsy of Ormerod, secretion anomalies like seborrhœa, hyperidrosis, anidrosis and the occasional vasomotor disturbances of the fevers, as in typhoid and of dropsy and anasarca.

The term trophic disorder of muscles and organs is at present much more restricted than it manifestly will be when physiology shall have more accurately numbered and located the trophic centers, whose influence over the tone and quality of the tissues and organs is now no longer a question. Certain nerve centers and nerve fibers do undoubtedly influence the growth and repair and atrophy or decay of the tissues, and Romberg, in this discovery, has rendered medical science in its practical aspects a priceless service.

About all the changes which come under our eye in the skin and muscles are due to impressions made through the trophic and vasomotor nerves, influencing the circulation and growth, among which we may instance scleroderma, myxœdema or cachexie pachydermique and the myopathies, pseudo-hypertrophy and progressive muscular atrophy.

PHYSIOLOGICAL RHYTHM, ETC.

The nervous system regulates the law of rhythm in the animal economy in both its physiological movements and pathological perversions of movement, and this fact affords us, from a neurological stand-point, important hints for the management of our patients and therapeutic suggestions, hints often overlooked in practice. It suggests, for instance, that we should interrogate our patients as to the normal rhythmical time for eating, defecating

and sleeping, in the administration of food, of laxatives and hypnotics, and suggest also the best part of the day for necessary disturbance of our patient with medical ministrations, ablutions, driving, exercising, etc. All habit, physiological or pathological, is bound up in the law of rhythm and a nervous system is essential to this phenomena.

The nervous system is almost an omnipresent system of the human organism. The more we learn of it the more do we wonder at man's wondrous mechanism. The more we see of its relations to organism the more we discern of its omnipotence and of its subserviency in the workings of the human economy. It excites, it controls, it reveals and is revealed and influenced by disease. The sensory nerve trunks and branches can be traced as clearly by neuralgia (sciatic, intercostal, trifacial, etc.), and by neuritis, as by the anatomist's scalpel; and the various paralyses reveal the channels of motor conduction and centers of origin of motor impulse, thus affording us means of diagnosis beyond the reach of our unaided vision. Thus cerebral localization has been confirmed as a fact of neurophysiology, as well as by electro-vivisection.

In the interrogation of all symptomatology in general, we cannot help but see how intimately associated the nervous system is with the movements of the organism under the influence of disease. These phenomena may truly, in a manner be called nervous. Certain it is that the nervous system in disease plays no insignificant part, often the most important; and to timely tranquilize and reconstruct it against the assault of the causes of disease in the organism is no small part, if not the chief part of the physician's work, for, though the blood carry germs of deadly disease to vital nerve centers, to conserve these centers by suitable therapeutic reinforcement against their destructive work, means victory over impending dissolution.

The *vis medicatrix naturæ* resides in these nerve centers, and in their power to maintain, under stress of

invading disease, the normal metabolism in the various organs, and, as I believe though this is not yet susceptible of scientific proof, of the furnishing and multiplying of the phagocytic hosts of conservative destruction in the healthy blood. If the blood is the life, the nervous system is likewise the life of the organism. In this dual government of the economy in health and disease, both

> Are parts of one great whole,
> Whose life the blood is,
> And the nerves the soul,

if this liberty of paraphrase heretofore employed by me, may be here again permitted. If we realize this fact in our clinical conclusions and efforts at treatment, we make better practitioners at the bedside than if we seek to explain the phenomena of disease by a single factor like modern humoralism or solidism, or visceralism or the germ theory, absolute and unconditional. It requires something more than a morbific germ to develop disease. The other factor is an assaulted, yielding and morbidly responding organism, and back of that are the disturbed or resisting mechanisms of neural control, central or peripheral, which resist, cast out or succumb to disease.

Certain phenomena of reflex, in clinical and surgical therapy, too, are better appreciated by him who thoroughly considers the nervous system in his practice. Such an one usually recognizes two factors in the peripheral causation and the morbidly responding center which betrays in an extraordinary manner the existence of the irritation, peripheral or central.

Benjamin Rush notes the fact that Leo X. died of joy upon hearing that a great calamity had befallen the French nation, and the door-keeper of Congress died from the same cause, inducing cerebral apoplexy upon learning of the capture of Lord Cornwallis and his army during the revolutionary war, and the great Harvey, who discovered the circulation, died of a fit of anger. It is

because impressions upon the nervous system have the power to kill that they may also engender and cure disease. This malevolent potency makes psychotherapy a benevolent possibility in practice, and no wise physician ignores it.

The Importance of Early Recognizing Neurasthenia. —A great advance was made in clinical medicine when neurasthenia, or as I have called it, general functional neuratrophia, was first recognized and differentiated from secondary exhaustion of the general nervous system, from the auto-toxicity of retained excretions and profound physiological brain and nerve and muscle tire. This condition described by Van Deusen, an American physician, in 1877, followed by Beard, another American physician, in 1878, is one in which the nervous system appears to suffer in its nutrition, normal stability and power, involving the viscera and nervous system only in a functional and secondary manner.

Neurasthenia or general functional neuratrophia, shows itself chiefly in the brain and is psychically characterized by timidity of conduct, nervous irritability and morbid fears, bordering on, but not becoming delusions, and physically by functional atonicity of the viscera, especially of stomach, heart, bowels and motor and psychical areas of the brain. It is the cause and source of apepsia nervosa and of cerebro-spinal irritation, and differs from hysteria with which it is sometimes mistakenly confounded in being continuous and not paroxysmal, and in being far more common in men than in women.

It is a conservative neurosis like migraine, saving its victims from profounder breakdown, because the individual will endure but so much and cannot stand a longer strain without a period of rest and repair, whereas if he could endure more, the issue would be apoplexy, paralysis or other organic trouble. Before its recognition, it was thought necessary that some organ or system (the sanguineous, hepatic, etc.), should be profoundly affected to justify a conclusion of disease, and great injustice

was done its victims under designation of hypochondriasis, hysteria, simple nervousness, etc., not requiring medication. Neurasthenia is a nineteenth century evolution in clinical medicine.

Dr. Geo. M. Beard forced the general recognition of this functional morbid state of the nervous system by the profession, though some physicians of eminence yet dispute it.

The Relations of Neural Over-strain to the Development of Cancer and Consumption.—The developmental relations of cancer to neural over-strain, worry and decadence of the brain and allied nervous system have lately received renewed consideration, since the writer first called attention to this singular fact in the cases of General Grant, Napoleon Bonaparte, Thomas H. Benton and others. I believe, as I many years ago stated, that a breakdown in the central nervous system by which its trophic and resisting power are greatly lessened, makes possible and precedes all cases of cancer. But for this, cancer germs, if such exist, would be inocuous. The same fact is in a manner true in regard to the receptivity of phthisis and other diseases of bacillic or bacteric origin. Seeds, to germinate, must have receptive soil, and in relation to cancer, as Sims Woodshead, who believes in its parasitic causation, declares, the germs require a lowered condition of the vitality of the epithelial elements in which they make their habitat, as conditions of their growth and development. Finding a soil, they multiply, secrete their toxines, and by their irritant action on the parts which they invade, resemble certain well-known pathogenic microbes, especially Koch's bacillus, in the degenerative processes and products which they entail.

But the question of the parasitic origin of this disease was left *sub judice* at the last International Congress at Rome, at the close of the most interesting and learned discussion ever held upon the subject. Pio-Foa, the referee's, advocacy of the parasiticism of cancer being ably contested by Cuzin, Duply and Cornil. Pio-Foa,

supported by Morpurgo, of Turin, maintaining that these parasites are encapsuled protoplasmic bodies within or without the nucleus of the cancer cell, similar to the descriptions of Clarke, Sondakeritch, Walker and others, resembling the spores of protozoa or malaria hematozoa, and are common to all cancers of glandular degeneration.

The peripheral neoplasms contain small parasites, the deeper, large sporocysts. Mitosis or karyokinesis is absent or scarcely perceptible where the parasites are absent or few. Dr. Shattuck (editor of the *Boston Medical and Surgical Journal*, the first journal to report these facts from the Eleventh International Congress), in commenting on this latter fact, says, "this shows that they (the parasites) live, but in tissues whose vitality is low."

In this memorable discussion the following facts were opposed by Professor Cornil and others to the statements of Pio-Foa and his adherents. Cancer exists in many modified cell-formations and has many nuclei resembling parasites. He asserts that Pio-Foa's parasites are metamorphosed nuclei resulting from morbid karyokinesis; that

> There are found also in cancer, degenerated cells whose protoplasm stains red, and which contain in place of nuclei granules, filaments or masses of nuclein, representing the different forms of indirect division, without the occurrence of achromatic filaments or of clear space around the divided nuclein. These are cell-degenerations arrested in one of the phases of indirect division of the nuclei. Cornil remarked that even migrating leucocytes interposed between cancer cells had been mistaken for parasites, especially when they had retrograded and had broken up into fragments of nuclein.*

And a yet stronger criticism of the parasitic origin of cancer is the failure of inoculation experiments to generally produced cancerous reaction, as Dr. Shattuck observes.

But even successful inoculations only bring us back to that other well-attested fact, the necessity of an adaptable soil and the absence of organic resistance, which we have placed in the neural regulation and normal inhibitions of vital cerebro-spinal centers.

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* *Boston Medical and Surgical Journal.*

Neurodermatological Advance.—Mr. Malcolm Morris, in his presidential address before the Harveian Society of London, reviewing the progress recently made in dermatology, after noting the fact that we now recognize the precise microbic agents which produce lupus, scrofuloderma, impetigo, leprosy and glanders, and speaking of the "new light" which experimental pathology has thrown on the nature of disease processes and the factors concerned in their production in the skin as in other organs, says:*

> Almost the only distinct evidence of progress apart from local treatment to which I can point, is the fuller recognition which has been arrived at of the influence of the nervous system in the production of skin affections. * * * The knowledge of the intimate pathological connection between the nervous system and the skin gives the key to the successul treatment of many cases which defy all local measures.

The same light has lately dawned on gynecology and every department of medical practice. We are approaching an era when the whole patient is to be treated, no more only a part or organ solely, and neurology will have a paramount place in general clinical medicine, notwithstanding the recognized and merited advances of bacteriology in pathogenesis.

Certain Heart Affections Proceed from the Brain.—What is true of the influence of the nervous system over the stomach in dyspepsia, and the lungs in the pneumonia of influenza, is also true of its influence in the production of certain diseases of the heart. They come from states of the brain, and here again has medicine in its work for the world's welfare, through physiological research, faced the prejudices of a frowning world against the so-called cruelties of vivisection.

Though the heart of a frog removed from the body will pulsate for hours, if fed with blood or blood serum, and will continue to beat even when divided into sections except at its apex, and even this will beat if tied to the end of a tube and fed under pressure, its

* *British Medical Journal*, Jan. 27 1894.

conditions of nutrition in vertebrates are determined directly by the nervous supply of the organs and indirectly by the blood (Mills), and the influence of the cardiac nerves becomes more pronounced as we ascend the animal scale, and in the heart of a frog there are ganglion cells, in the sinus venosus, in the auricles and ventricles (ganglia of Ludwig, Remak and Bidder.) They are also in the warm-blooded animals, dogs, sheep, etc.

So that while conceding spontaneous muscle cell pressure and protoplasmic contractility, we know that in certain cases cardiac contractility is modified by medulla and vagus stimulation, to the degree of arrest, slowing, enfeeblement or intermittency.

When the vagus influence is altogether inhibited, the heart's action is increased in force and frequency, while section of both vagi leads to histological alteration and fatty degeneration. The sea turtle's heart has been suspended through vagus stimulation for six hours and causing its death.

The heart dilates with or without blood during vagus arrests from vagus section, drug impression or electric excitation.

The heart may be reflexly inhibited by gastric and abdominal reflex irritation, flatulent dyspepsia, the Klopfersucht of Goltz, etc.

If one or both vagi are intact, stimulation of the medulla arrests the heart.

The conclusion of a cardio-inhibitory and accelerator center in the medulla, which influences the heart through the vagus, is the obvious teaching of physiology.

When the heart is severed from the central nervous system by section of the vagi nerves, or destruction of the vagus center takes place by traumatism or disease, profound changes in the heart's structure ensue, this points to central trophic influence through the vagi and to the often central nervous origin of heart disease. The regularity of the heart's rhythm from, and strengthening of its beat through, vagus stimulation and

central stimulation, as by certain volatile and internal stimulants, is suggestive.

We are now able to understand how many disorders of the heart are coincident in their inception with occasions of fright and worry and anguish, sudden accesses of extreme ire, disappointment, prolonged enforced vigilance and other brain strains. These, as Mills tersely says, point to influences of a central origin as greatly affecting the life processes of this organ.

Czermack, pressing a bony tumor in his neck against the vagus nerve, and Hermann and Col. Townsend repeatedly suspending the heart's beats at will (the latter once too often, for he died from his final experiment), also prove the central and vagus nerve influence over the heart. Nervous influences certainly play no small part in the causation and modification of the heart, and with Mills we would "extend such a view to all parts of the body," especially in man. The source of the heart's diseases is often in the brain and other parts of the nervous system, and so is the source of many other diseases for which only the organ displaying the functional disorder and the blood which nourishes it are treated, whereas we should more often treat the whole man, nervous system and all, but the nervous system especially, if we would be most successful.

Now, therefore, in a newer, broader, truer sense than ever before, do we recognize the monism of man. Not in the sense of the philosophical schools, but in a psycho-neuro-physical sense in our survey of his physiopathology. In estimating the causes, concomitants and sequences of his diseases, we consider the whole man in his psycho-neuro-physical relations. As the "medulla oblongata is functionally the ruler of vegetative life," so it governs and influences many diseases, as the psychical and psychic centers of the cortex influence it and the centers below it, as the recto genito-urinary centers of the cord, etc.

As we recognize psychic influence over our physiological life, over physical and mental habits, so must we come to acknowledge it more generally in our dealings

with disease. The physiological law that habit in the psychical life develops a tendency to recurrence, is also exemplified in the disposition of certain diseases to recur and the inter-relation between muscular and mental tonus suggests the importance of maintaining the psychical tonus in the treatment of all diseases, and the successful therapeutics of hypnotism proves it in many.

As it is difficult to believe in force existing not in contact with matter and without matter existing on which force can display itself, so it is difficult to conceive of the existence of disease in the human body without an influencing or influenced, *i. e.*, disturbed, nervous force.

Henry Maudsley has likened the physiological life of the cerebro-spinal centers to the mutual inter-related and subordinated movements of the companies, battalions and brigades of an army under command of the higher ganglion cells of the headquarters in the brain, and mental disease to mutiny and rebellion. Huxley has likened the body to "a machine of the nature of an army, not that of a watch or of a hydraulic apparatus. Of this army each cell is a soldier, an organ, a brigade, the central nervous system headquarters and field telegraph, the alimentary and circulatory system the commissariat. Losses are made good by recruits born in the camp, and the life of the individual is a campaign conducted successfully for a number of years, but with certain defeat in the end." Each tissue under the trophic influence of neural communication with its appropriate nervous headquarters conducts its own repairs, *i. e.*, replenishes its own forces. When proper physiological conditions, including neural connections, are maintained, each tissue in the animal economy correlates its own proper life force. Destroy a trophic center and the part it innervates atrophies, sever a motor nerve and the muscle it supplies is paralyzed, cut a sensient nerve and no power of our art will restore sensibility over that channel that does not reunite or reproduce the nerve. Our aim in the practice of medicine then should be to save the nerv-

ous system, to conserve neural integrity and force in relation to all parts of the organism suffering under the depressing influences and destroying tendencies of disease.

This should be our aim always, whether we are enabled to make a satisfactory local diagnosis or not, for if we succeed in saving the nervous system absolutely, we save the man, for it is only after disease makes its final resistless inroads here that our patient dies.

Hæmophilia and the Vasomotor System.—The neuropathic source of hæmophilia in the vasomotor system is more probable than any asserted dyscrasia of the blood, and cholera is so largely a condition of nervous prostration in its symptomatic expression, that if we treat it on this theory, keeping the patient absolutely recumbent and give him copious hot water drinks and enemata, we are more apt to save our patients by this than by any other one plan. Of course, the coma bacilli should be searched out at the same time, with our hot drinks and colon clysters, and destroyed so far as may be practicable, but it is the damage done to the nerve centers that we wish to guard against in this disease till the collapse stage passes, the bacilli are destroyed and reaction comes on. Cold colon douches are likewise of some benefit. I think the water does the work and not the soap in Elmer Lee's plan of treatment, which I uphold on the physiological principle that the abdominal ganglionic centers and by eccentric impression the spinal nervous system is favorably impressed by his method, while such bacilli as the water can reach are washed out of the intestinal tract, but these are not the most of them.

To divest ourselves of undue skepticism in regard to the influence of the nervous system in the development of what we are accustomed to call disease, but which is often the secondary pathological product of a morbid process, we should recur often to the physiological possibilities of the mechanisms of neural control over the arteriole system and of sensation and motion.

See Brown-Séquard, for instance, producing hemorrhage into the auricles of guinea pigs by section and irritation of the restiform bodies in the medulla and flushing the neck and face by section of the cervical sympathetic! In this we have the explanation of hematoma auris and cerebral hyperæmic states.

It is through the nervous system that we may understand how the hair turns in melancholia and may thicken in chronic mania or dementia of the less distressed and more stupid and inactive forms, how its color may turn from dark to white and back again to dark, with the accesses and recoveries of recurrent insanity, how it may gloss and dry, erect or flatten, be lost and regained under mental states, and how the teeth may decay, the bones and nails grow brittle and the skin harsh from the same cause and how, from neuritis, the nails transform and the limbs waste as well as fail in sensibility and motility, besides the eczematous, pigmentary and horny changes of the skin from nerve injuries.

Body Temperature and Fever Dependent on the Conditions of the Nervous System.—That remarkable phenomenon the uniformity of the temperature of the human body at all latitudes and in all seasons is due to the regulating adjustment of the circulation, perspiration, etc., to environment, through the nervous system, and when temperature is disturbed, it is due to irritation, mechanical, chemical or toxic, of the nervous system, as in traumatic violence, microbic, septic or drug disturbances.

It must by this time be apparent from what we have already said that the intimate physiological relations between the nervous and the vascular and glandular systems justify these pathological inferences and confirm the clinical facts.

"The nervous system has so close an alliance with the functional activity of the secretory and excretory glands of the body that emotional disturbances, according to their character, act as depressants or excitants of the functional life of these organs. Some of the more com-

mon of these effects are every-day familiar facts, as when the flow of tears is excited by grief, or the secretion of saliva and gastric juice by the smell of food." And it is believed that, "in the same manner as the superficial glands are easily influenced, so, in all probability, are the blood-making or ductless glands* regulated and controlled by the organic nervous system."

THE NERVOUS SYSTEM AND THE LIVER.

The influence of the nervous system over the liver was believed in by the ancients who, mistaking coincidence for sequence, attributed melancholia to atrabilis. Murchison asserts a well-observed fact that the secretion of bile is interfered with by prolonged mental anxiety, worry and incessant mental exertion, and that sanguification and blood changes in which the liver takes part often result from mental causes.

I think we need no longer doubt this or indeed any possibility to neural influence when we see pernicious anæmia follow degenerations of the spinal cord, and progressive muscular atrophy and anæmia to follow cerebro-spinal concussions.

If the mind has such potency how careful should physicians be of their demeanor or speech before patients. How guarded as to prognosis. And the surgeon, how careful should he be as to the undue and inopportune display of his operative armamentaria. With these facts in view the propriety of large medical and surgical wards where the sufferings and death of one patient

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* Dr. A. D. Rockwell, in a paper in the *New York Medical Journal*, Dec. 10th, 1892, maintaining the nervous origin of jaundice, said: "He had had occasion to see and treat a considerable number of cases of jaundice dependent upon a great variety of causes, and he had been impressed with the frequent occurrence of cases due to deranged innervation, interfering with the normal metamorphosis of bile. Acute atrophy, in which the secreting cells were rapidly disintegrated and the functions of the organ arrested, appeared to him in many instances to have a purely nervous origin; and very often the first symptoms of the disease occurred immediately after a severe fright or an outburst of passion in a person previously healthy. An impression made upon the brain appeared to be reflected to the liver and to derange its nutrition. Even cancer of the liver appeared sometimes to result from the functional derangement induced in the first instance by mental trouble. So this condition appears to us."

may be readily known to the others in the ward is questionable. Other obvious considerations needless to mention here are suggested in this connection.

These neural connections, direct and indirect, between centers of the brain and the circulation, the viscera and the secretions, reveal the physiological basis of all forms of psychotherapy, of faith cures, mind cures and modern miracles, of the principles of which those who perform them are usually ignorant; also, of hypnotism and its therapeutic results.

The wise physician combines chemistry and a scientific *materia medica* with honest and hopeful mental impression, establishing in the patient where he can and is justifiable by the clinical facts without deception, a buoyant psychotherapeusis in the patient himself. The lengthened visage, the hopeless foreboding, the dismal and solemn aspect and funereal demeanor on the part of the physician are not only out of place and unjust to the patient, but are bad therapeutics.

LEUKÆMIA AS A NEURATROPHIC BLOOD DISEASE.

Leukæmia is another and most remarkable condition which may result from profound nervous exhaustion or shock or from malarial neuratrophia, and shows how the blood may change through nerve influence as cretinism and pachydermic cachexias shows the relationship of thyroid and nervous degeneration and as thyroid exterpation also proves.

THE RATTLESNAKE POISON FIRST A DEADLY NERVOUS SHOCK.

If the remarkable blood cell changes of this disease may originate in morbid neural impression, it would seem unnecessary to go further for proofs. But the poison of the rattlesnake and other toxic substances may kill through immediately fatal shock without detectable lesion, though grave structural changes follow, especially in the destruction of the blood's fibrin, and later putrefaction, in the case of crotalus poisoning, if the patient survive

any considerable length of time. How speedily the symptoms of this poison follow, if death be not instantaneous; the cry of terror, the giddiness, the syncope, the vomiting, the prostration, the rapid, irregular, imperceptible pulse, the sunken eye, the swollen face and body, the jaundiced, cold, clammy, vesicled skin, the delirium, sleeplessness, torpor, coma, involuntary intestinal and vesical discharges, tremors, convulsion and death! First the nervous shock and then the blood disorganization and organic dissolution.

Drysdale examined the cases immediately fatal with the best of lenses and found no lesion. The nervous system was directly stricken, and life, of which the cerebro-spinal and ganglionic systems in man are the representatives, ceased. The physiological barrier wall in the nervous system is broken and disease invades.

The nervous system is the supreme ruler in the organism. When disease enters, it is weakened; when death takes place, it is dethroned. The germs of malaria, tubercle, cholera, typhoid, tetanus, etc., or the living virus of any fever, make no fatal inroads until they break down and destroy centers of neural control and resistance.

Whatever view we may take of bacilli, bacteria or cocci which our glass may reveal to us in the damaged organism, whether we regard them as carrion about a carcass, rats forsaking a sinking ship, thieving, destroying, or scavenger parasites, one thing is certain, viz., disease becomes manifest only after the mechanisms of neural sensation, emotion, ideation or nutritional or motor control reveal it, for as I have elsewhere said, the nervous system is the central executive and universal sentinel system of the organism. It governs and legislates for the physiological body, exercising, moving, restraining, regulating or inhibitory power over organic processes, in health and in disease. It has its subordinate, tributary and sustaining forces in the glandular, vascular, osseous and other systems. It commands, governs and regulates them and

they influence it, as the citizens and subordinate officials of the State may influence, and even govern the chief executive or the king.

Raynaud's disease, with its local asphyxia and symmetrical gangrene of the extremities, though its cause may be uric acid, as Haig* maintains, is manifest to us, as Raynaud believed, through spasmodic contraction of the capillaries, as the gangrene of ergotism is.

Haig contends that the uric acidæmia of gout and rheumatism "contract the arterioles and produces high arterial tension," and that glycosuria is alternative of, and contemporaneous with gout, Ord maintaining that the congestion of the liver is due to high arterial tension, while Pavy, according to Haig, credits diabetes to a vasomotor paralysis of the chylopoetic circulation, which allows arterial blood to be supplied to the liver in place of venous.†

Haig concedes that the hepatic congestion dependent on the state of the vasomotors develops the saccharine diabetes, thinks the uric acid causes that, but attempts no explanation except a dietary one, of the uric acid in the blood.

If I had the time to write a book on this occasion, I think I could show the nervous system to be primarily at fault in the uric acid diathesis and that migraine, epilepsy, morbus brightii, diabetes and melancholia, which attend upon the chronically gouty and rheumatic and alternate with these states, are varying neuropathic states, with uric acidæmia, albuminuria and sacchæmia as their sequences. But this would be profitless. The practical clinical and therapeutic lesson is to correct both the abnormal blood and the faulty nervous states.

The contracted arterioles which raise the tension in the arterial system and diminish the circulation through the organs and tissues of the body need remedying, as well as the uric acidæmia, the "hetero-albuminæmia, albuminuria,

* "Uric Acid in Causation of Disease," 2nd edition, page 201.

† *British Medical Journal*, 1883, pages 863 to 866.

etc." and the deficient circulation and the deficient metabolism of organs and the disordered assimilation, as well as diet, for some persons may eat any kind of food and have neither gout nor rheumatism, nor diabetes, nor Bright's disease, so long as the governing nervous system maintains the physiological equilibrium and sustains and secures it against pathogenic forces from without and within.

A change in the weather or a certain exposure sends one man to bed with rheumatism, another with pneumonia and a third comes down with remittent or intermittent fever or phthisis. We say uric acid in the first case, pneumonococci in the second, malaria in the third and tubercle bacilli in the fourth.

But why do these morbific forces now more than any other time come so opportunely and seize upon their prey?

We say it is because the vitality is lowered and the organic resistance is lessened. What is that vitality, that organic resistance which permits one man to brave an atmospheric or climatic environment with impunity from disease, in which another falls a certain victim? What is it that permits one man to eat everything without being made dyspeptic, while another can swallow scarcely anything without suffering the gastric distress of indigestion? We say one has a weak stomach, but if we take into account the whole man we find it is the brain of the dyspep tic rather than his organs of digestion, that has been always punished by its owner's imprudent and reckless habits, though the stomach too may have been abused. We get a similar answer in regard to the remote causation or determining factors of disease of many other organs. We have invented, for evasive answer, certain elucidating terms, as idiosyncracy, diathesis, morbid proclivity, inherent organic tendencies, etc., and we make many special explanations, like the little fibs the school-boy tells to extenuate a folly, each leading to some other and bigger fib, until he realizes that honesty is the best policy and finally owns up.

My answer has already been intimated. I cannot on this occasion weary you with further detail in elucidation.

I say only in conclusion, to forestall certain criticism that, though the primal potency of the nervous system resides in the sarcode, much of its potentiality in the highest and most complex animal life, seems to have passed in process of evolution from protoplasm to nerve centers and the most there is of man is his nervous system. In this system resides, in highly evoluted form, spontaneous and reflex motion, sensation and the governing influences of assimilation and reproduction. What should we not expect of such an organism impressing and impressed by disease.

This brief survey of a broad subject brings us across the century twenty years before the one now soon to close had begun, to the immortal dictum of Cullen, the truth of which the progress of medico-scientific research in clinical medicine now confirms, "*Quantam ego quidem video motus morbosi fere omnes a motibus in systemate nervorum ita pendent, ut morbi fere omnes quodammodo Nervosi dici queant.*"

And now in the sunlight of advancing science and of the approaching twentieth century, I proclaim that neuriatry and the practice of general medicine are practically one.

The practice of medicine is rapidly becoming one of neurological methods, of neuriatry and psychiatry, and the best neurologist, all other attainments being equal, must of necessity make the best general practitioner. What Lord Chesterfield said of a Christian gentleman, I would paraphrase and say of the neurologist; he is the highest style of physician, and of medicine as a whole, with Hippocrates, it is of all arts the most noble.

Thus much, and yet not a moiety in regard to the relation of the nervous system to disease and practice! Thus much of neurological progress relative to general medicine. Obviously we cannot now enter into all the marvelous advances and wondrous resources of modern medicine. In the pages of a thousand vol-

umes and the works of a thousand modern hospitals her glorious record is partly made for the welfare of man, as the nineteenth century recedes into history. But there she stands in her grace and grandeur, the peer of all professions! Ever faithfully by the side of man from the cradle to the grave, in the hour of his saddest need, mindless of home or creed, she bends with pitying substantial aid over his suffering and prostrate form and lends strength to his weakness.

Handmaiden of sweet charity and exemplar of the golden rule, she unshackled the lunatic and brought him from his dark and dreary dungeon into light and liberty, while theology was yet calling him demon or devil-possessed, and she now extends her helping hand to the inebriate, while the world yet condemns him without qualification because of the inherent vice of his unfortunate organism and largely withholds its sympathy. She has likewise extended her protecting charity to the epileptic, the hysteric, the victim of chorea or St. Vitus' dance and the so-called creatures of obsession, which the law once condemned to criminal death.

She has influenced courts to modify the former harshness of their ruling towards certain classes, and caused them to recognize disease and degeneracy of brain in extenuation of crime, thus tempering justice with mercy towards the organically weak and maimed in brain and mind. Judicial theories of what should constitute insanity and allied conditions exempting from responsibility to law, have given way to clinical fact ascertained through psychological expert testimony and the "knowledge of right and wrong" test of mental aberration has, in consequence, ceased to be the sole criterion of responsibility in questions of insanity before the law.

THE TREATMENT OF INEBRIETY.

America was the first country, the great Rush was the first physician to recommend the "establishment of

a hospital in every city and town in the United States for the exclusive reception of hard drinkers," and to regard the drink habit as a disease and advise the blending of medication with religious and moral suasion.* And now many regular hospitals, assisted by our State laws, are saving the inebriate from that destruction from which neither his own will, nor moral suasion, nor any other influence could rescue him. Yet no monument at the nation's capitol bears testimony of the people's gratitude to this great physician and signer of the Declaration and surgeon of the Revolutionary Army. I cannot help this digression when I reflect upon this nation's long neglected debt of gratitude. I repeat the plea I made last year. Benjamin Rush's name is immortal, whether his memory is preserved in monumental bronze or not, but the government owes his memory, his country and the world, this debt, and every consideration of delicacy, and of decency, of justice, and of patriotism, to its meritorious dead, demands its honorable discharge.

This is the fruit of our friendship for the unfortunate lunatic, and in American courts the product of ripened seed planted in the field of forensic psychiatry by that eminent and immortal American medico-jurist, Dr. Isaac Ray, of Philadelphia, whose great work, the "Jurisprudence of Insanity," was the beginning of a memorable era in medico-legal progress, and gave American psychiatry a distinguished standing before the courts of the country and of the world. In this classical American work the disease of brain and change of character criteria received their clearest elucidation after Andrew Combe, and since the decease of this great American alienist, that other and congenital form of mental disease, paranoia, has received clear elucidation and distinctive differentiation through the contributions of American and foreign writers following the treatises of Erb and others abroad.

* I have elsewhere discussed this subject *in extenso*. *Vide* "Treatment of Inebriety," etc., in Bibliography.

The hospitals for the insane which have made the names of Pinel, Tuke, Chiarugi and the later alienists immortal, and have been followed by homes and schools and hospitals for the feeble-minded, in connection with which Edouard Seguin, of America, has an undying place in the philanthropic heart of the world, along with that of Froeble, in Germany, from whom Seguin got the inspirational inceptive idea and patience of training and improving the mental evolution of these unfortunate defectives, and American surgery, thanks to Dr. Wm. Fuller, of Grand Rapids, Michigan, first suggested (in the face of the Old World's sneers) a possible operative remedy for the relief of certain of these defectives, the feasibility and value of which has lately been acknowledged abroad and demonstrated at home. Linear craniectomy has proven its right to a trial. It will not relieve microcephalic or porencephalic idiocy, but in other forms of arrested brain development through premature contraction of the cranial vault, this procedure has made it possible for the brain to develop, the speechless to speak and the convulsive to cease their spasm, just as other forms of craniotomy have done for pressure, aphasia and epilepsia.* This devoutly-to-be-wished consummation will be hastened through general use for cerebropathic investigation and description of the marvelous piece of neurological mechanism which I now show you as the ingenious handiwork of an American anatomist, not yet so widely known to fame as he deserves to be, Dr. J. P. Fuller, of Grand Rapids, Michigan. In this unique contrivance the brain has been represented in thirty-seven transverse sections, hinged together in natural form and shape, with the superimposed superficial psychomotor centers, the downward paths of conduction to the cord

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* Dr. J. F. Binney, of my own State, has this year reported in the *Annals of Surgery*, for April, one such successful operation, and Paschill reported in the *International Medical Magazine*, another last year; both being followed by marked mental improvements. Each of these gentlemen likewise report other cases without satisfactory results. Frank, of Chicago, has paved the way, I think, to the ultimate success of cerebral ventricular puncture.

and the entire brain in its median and spherical and interior aspects are separately and relatively shown.*

The saving triumphs of brain surgery through an advanced neurology are now simply marvelous, but more marvelous far than this wondrous work of salvage will be the saving of the brain and nervous system from the necessity of surgery, the mark at which general medicine and neurological medicine are now aiming, and a goal much nearer reached now, than in the past.

Should men contest the claim of medicine to being the greatest of the world's benefactions, we reply, the germ theory of disease causation alone, with its applied antagonisms, hygiene, antisepsis, perfect cleanliness and resistive and tolerant inoculations, has done, is doing and is destined yet to do, more for the physical welfare and salvation of mankind, than all other causes of human comfort, conceived in the mind and heart of man.

But for our applied teachings of hygiene, the world having its population in the last one hundred years nearly trebled, and civilized life having become so complex and degenerating in populous centers, the race would now be on the road to extinction.

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* Dr. Fuller says in his preface to the great demonstrative work of his: "When a medical student, the author of this work experienced great difficulty in understanding the anatomy of the brain from plates and descriptions in books, and recognizing the fact that compared with the number of students, the opportunity of studying the anatomy from the natural brain is rare, he has carefully prepared a series of casts from actual dissections and casts, which he hopes will materally aid the teacher, and render the task of the student much easier.

"The dissections presented in this specimen are made from photographs taken of sections of a carefully prepared brain, cut one-sixteenth of an inch apart and perpendicular to a line drawn from the external process to the occiput.

"Familiarity with these plates and their situation in the brain will enable the necroscopist to recognize, at a glance, any section that he has made of the natural brain, and to select the proper plate from a book of similar plates which accompanies the preparation, upon which to describe any lesion found, and which he can attach to his report of a *post-mortem* examination, so that others also familiar with the position of the plates comprising this series will be able to locate the lesion described.

"In this way a more ready understanding will be effected between neurologists, and it is hoped that, by this means, together with the careful observations of symptoms, the functions of many parts of the nervous system now obscure, may be more clearly understood.

"This preparation is also invaluable to those interested in the surgery of the brain, showing, as it does, the relation of the external marking, with deeper structure beneath."

The world is beginning to clean up, and mankind to recognize the necessity of cleanliness.

We are promoting this antisepsis on our part in giving to man the purified air of heaven and the waters of the earth freed from pollution, the air and water and the spirit in man to conceive and apply measures for their purification, together with the uncontaminated and uncontaminable, sunlight are the direct gifts of God. We have taught mankind the value of cleanliness, the life-saving and prolonging value of physical and moral purity, and, putting our precepts in practice, when permitted, we put back pestilence and turn death and decadence from individuals and peoples. We are not gods of the air, but we walk the earth as watchful pitying gods in the service of man, saving him from pestilences that walk in darkness, and of which he knows nothing save in their destructiveness, until medicine enlightens him and destroys the destroyer of his health and strength and attendant happiness. But for the interposing monitions of medicine, man would not to-day be awakened to the danger of making a beverage of the attenuated liquid pollutions of the soil and falling ill all unconsciously with typhoid and other maladies, as in the days of the not far distant past, reverently submitting to the mysterious ways of an all-wise Providence, as his remotor ancestors did to the fancied wrath of offended deities. So little a thing as the timely boiling and filtration of all drinking water will confer a boon on mankind, in warding off disease, which cannot be computed. The application of the discovery of Jenner, is as nothing in comparison—not even the great disease-averting and life-saving discoveries of Pasteur could be so potent.

As "the sun smiles on the earth, and the exuberant earth returns that smile in flowers," so do the silent ministrations of our noble profession fall upon a recipient world, which blossoms in healthful response. Our ministrations of medical charity, like those of mercy, drop

Like the gentle rain
Upon the place beneath,
And is twice blessed:
It blesseth him that gives
And him that takes.

Noble followers of a glorious vocation, grand and beautiful profession! Sublimest and best of the callings of men, save that alone of the Great Physician of Galilee, whose example encourages us and whose voice approves.

Besides the ten thousand hygienic resources for warding off disease and promoting the world's comfort, which it unconsciously and without thanks to our beneficent profession, daily employs, Medicine now mitigates and annuls pain through analgesics and anæsthetics (local and general), contributes to human comfort under the most painful circumstances to a degree far beyond that of any other physical benefaction to mankind. Medicine has minimized and trained the lightning so that it ministers to the relief of human misery and the cure of disease. She has made of it a search-light for the human body, an assuager of pain, a producer of sleep and a destroyer of destruction.

The boon of hypnosis and narcosis under the many methods for its induction known to our art, saving the insomniac from the precipice of mental overthrow or neural failure in the lower centers of the cerebro-spinal axis or peripheral nervous system, the power of antisepsis, and through it the wonderful procedures and possibilities of modern surgery and this *fin de siecle* hygiene. The many and marvelous therapeutic and hygienic advances in promoting the phagocytosis of the toxic bacteria, the destruction of the ptomaines, and in other directions of relief and cure, the discoveries of pathology, histology, medical chemistry, biology, neurology, psychology, psychiatry and the contributions of surgery, gynecology, ophthalmology, otology, laryngology, proctology and the other specialties of study and work, have made the later decades of the present century the most

memorable in resourceful discovery in the history of medicine or in the history of mankind.

Intravenous injections of immune animal blood serum, promise much for the cure of phthisis and other chronic contagious diseases, and there appears good therapeutic promise for the coming years in mycodermic medication.

These grand achievements give us hope and promise of even grander contributions to the weal of mankind before the close of this final decennium of nineteen hundred.

Medicine has made the Pontine Marshes of Ancient Rome, the jungles of darkest Africa, comparatively safe to the traveler, and the valleys of the Nile and Mississippi are no longer menaces to health. Quinine, eucalyptus, picrate of ammonia and tasteless Fowler's solution, have augmented human happiness and spread the commerce of civilized nations beyond computation. The world applauds its Livingstons and Stanleys, yet omits its meed of praise to those who have made their discoveries and the fruition of them a possibility.

Thus you see medicine ever advances toward its final goal, the health and consequent happiness of mankind. Thus we see, though with contracted view only, from this cursory survey, how much the past few years have done in the direction of medical advance. Thus we see that this great profession, the uplifter, friend and benefactor of mankind, though the jest betimes of the world's great wits, continues its too-little appreciated benefactions. Its votaries, forsaking or ignoring common routes to glory for paths of duty, have gone on ameliorating human misery and conserving and saving limb and health and life, and through health, the welfare of the State, deserving, but not receiving, the conqueror's word of praise, marking the march of medicine with blessings on mankind, and deserving the world's gratitude far beyond what the world has ever recognized. In the fierce contentions of mind with mind and strain of modern business and professional life, and in man's contests

with nature and battle with the elements, medicine preserves and fortifies man's organism for the fierce fray, that he may fight on and conquer success, prosperity and happiness for himself, for his family and for the commonwealth.

When will a gratefully appreciative nation erect suitable monuments to our workers, our warriors, our martyrs in the glorious cause of human happiness and human progress? for without health, man is nothing. In the struggle for the survival of the fittest he falls in the fight for existence, and becomes the victim rather than the vanquisher of his environment, and nations do likewise.

The world owes medicine much. When will it ever repay even half the debt? It will be when "isms" and "pathies" in practice are dead; when the now vanishing days of sectarian theories shall have passed away forever as the playthings of a speculative, unscientific past; when a unified profession practicing in the faith and teachings of true science shall have its legitimate combined influence over all of the people. It will be when students are taught a sufficient length of time (five years or more) in our medical colleges, to enable them to master the principles of medical science and the precepts of medical practice, and to practically appreciate the ethics of their profession.* The world will pay our worthies the debt it owes them in tributes of honor and glory and adulation, and in monuments of marble and bronze, when human progress shall have reached that high stage of evolution when there will be more renown for him who saves life in the name of charity than for him who takes it from motives of glory or base ambition; when there shall be accorded more glory to him who builds up than to him who tears down the fabric of human hap-

* It will be when genius is encouraged in the profession by the profession and for the profession and for humanity, by countenancing every proper pecuniary recompense which a grateful people without the profession cheerfully awards and secures to its meritorious inventors. It will be when the profession in every possible manner bends its best energies in studying how it may take care of its own household, enlarge its prosperity, usefulness and influence with the world.

piness. In that on-coming day of human enlightenment, the true physician will be esteemed above the warrior. Nations will give him merited places of honor in ministry, in cabinet and council, and on tented and battalioned fields, when honor or patriotism calls to arms for God or country. Then it must needs come that the physician will assert and secure his peerage among the people. History will then give medicine an illumed and illustrious niche in her temples of enduring fame, and the glorious deeds of her worthy sons will be justly immortalized on historic page and in poet's song. And our own America will then render long neglected memorial justice to her great medical benefactors. Bronze and marble forms of her great dead doctors, who have dared and done more than warrior or statesman for the public weal, will adorn her public parks and grace her public halls. The enlightened citizen, standing beneath the dome of the nation's capitol, as he looks upon the immortal names there inscribed, will see those of America's great physicians written alongside of her other philanthropists, her jurists and her presidents. American philanthropists will read their names there inscribed "in letters of gold and in pictures of silver," and revere their memories as the patriot now reveres the memories of Washington, of Jefferson, of Franklin and of Patrick Henry. The names and remembrance of Benjamin Rush, of Ephraim McDowell, of Marion-Sims, of Beaumont, of Long, Gross, Mütter, Gibson, Dunglison, Cooper, Morton and Jackson, and their good work for the weal of the world will be as immortal as those of our Clays, our Websters, our Marshalls, our Calhouns and our Bentons. Every patriot will revere them, because they have contributed to conserve the health of the public, realizing that in the good health of a people is their happiness, their physical, political, mental and moral power, and to be without this power is to be as pigmies among the nations, puny in prowess and pitiable in all that makes man or nation great and good.

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NEURO-DERMATOLOGY.*

By A. H. Ohmann-Dumesnil, St. Louis,

Professor of Dermatology and Syphilology in the Marion-Sims College of Medicine, St. Louis.

GENTLEMEN:—I desire, first of all, to express to you my most heartfelt thanks for the great honor you conferred upon me in electing me to the office of chairman of this section. I am fully aware of the partiality you displayed in this, and it is my sincere hope that I shall so conduct the proceedings that you shall have no cause to regret the choice you made. The section, I am proud to say, has been well attended in former years. Moreover, it has had the time at its disposal fully occupied in the consideration of the many valuable papers and interesting discussions which have come before it. The indications for the present meeting are equally encouraging despite the fact that the majority have traveled such enormous distances to attend. And here, let me thank one and all of those here for this most tangible proof of their unwavering interest in the subject of dermatology and syphilology.

In my studies connected with a number of cutaneous diseases I have been forcibly impressed by the fact that many of the pathological processes which occur are directly or remotely connected with the nervous system, which, as you all know, plays such an important part both in the functions of the healthy individual, as well as in the disturbances incident to disease. The importance is such that it has called forth the special labors of a most indefatigable set of workers who constitute the neurologists and neuropathologists of to-day. Psychical as well as physical disturbances have their influence to such a degree that it is not astonishing to hear some

* Chairman's Address before Section on Dermatology and Syphilography of the American Medical Association, June meeting, 1894.

neurologists make the claim that the pathology of the future will be confined to that of the nervous system. Be this as it may, we are confronted at this day with an array of facts so numerous and so convincing in their nature, that we are forced to the inevitable conclusion that dermatic affections, in numerous cases, depend for their being, evolution and full development upon changes in the nerves, both functional and organic.

A large class of dermatoses which is daily awakening more and more interest is that included under the general term erythemata, as well as others which have been clearly set forth in the various systems of classification which have appeared from time to time. S. Jessner, last year in a monograph,* groups his first class into three varieties all clearly neurotic in character, viz., anomalies of sensibility, of mobility and of secretion. The very groundwork of these changes is nervous. In his second class we find four groups, in three of which are to be found skin diseases of neurotic origin. Again, in the classes of hypertrophies and atrophies, numbers are to be found of more or less distinct neurotic origin, as also in the inflammatory diseases. Almost all the regressive disturbances of nutrition, the sixth-class of Jessner (*Regressive Ernährungsstörungen*), are of distinctly neurotic origin.

I have briefly alluded to this author's classification, as his attempt has been to make it upon an anatomico-pathological basis. It is wise in that an etiological classification would be as confusing as Willan's system, which was purely based upon objective symptoms. But the most modern classification shows us that almost every class contains skin diseases in whose causation the nervous system exercises no small degree of influence, thus accentuating the vast importance it has in reference to dermatoses.

Upon a closer examination of the subject we find

* "Ein Dermatologisches System auf pathologisch-anatomischer (Hebra'scher), Basis." Hamburg, 1893.

that a most deep study is necessary to fully grasp the importance of the *rôle* played by the nervous system as it is called—erroneously perhaps, for it embraces so vast a field that specialization would seem to be a prime necessity. A moment's thought will suffice to demonstrate this when we but consider that the various portions going to make up the different systems of nerves, all play more or less important parts in the production of affections of the skin, organic or functional. In fact the changes in the nerves themselves may be either organic or functional, producing direct or reflex changes. The parts of the general nervous system involved may be the brain, spinal cord, or the spinal or cranial nerves either superficial or deep. In addition to this the sympathetic nervous system exerts a by no means small influence, through perturbations of its fibers, ganglia, nerve-terminals in the skin, or those as yet hypothetical terminations, which are generally known as trophic nerves.

I certainly do not wish to pose as one desirous of reducing all dermatological etiology to a simple neurotic basis, but I do wish to say that our pathology has been limited more than it should be to the consideration of histological and micro-organic changes without taking into consideration to a sufficient extent the changes occurring in the nerves and their terminals. I fully understand the difficulties which lie in the path of the pathologist the moment he essays to discover changes in the finest terminations of nerves, but they are surely not insurmountable.

In 1882, Henri Leloir published his studies,* up to that time, in a monograph which stands to-day a monument to his energy and talents. The work so auspiciously begun does not seem to have brought forth anything but isolated papers, but even these are of sufficient value and importance to indicate the serious attention which the whole subject deserves. Unna, in a study of

* "Recherches Cliniques et Anatomo-Pathologiques sur les Affections Cutanées d'Origine Nerveuse." Paris, 1882.

the neurotic changes occurring in the skin in syphilis and leprosy, read before the First International Congress of Dermatology, has distinctly shown the existence of such lesions, which he has named neuro-syphilidæ and neuro-lepridæ. I could go on multiplying such examples to show that I am by no means laying undue stress or attaching too much importance to what may be called neuro-dermatology. I only desire to call attention to a most important, as well as interesting portion of dermatology, which seems to be rather neglected, or, at least, is not receiving that attention which its importance would seem to demand.

I would even make so bold as to venture a prediction that the dermatology of the future will be enriched by a general chapter, which will be added to the general considerations on the subject—and this chapter will be devoted to neuro-dermatology or a consideration of the *rôle* played, in the production of, as well as changes in, cutaneous lesions, by the general and special systems which go to make up the complex nerve structures of the body. The formulation of such a chapter will be necessitated by the exigencies of the conditions found and will add one more interesting part to a subject already rich in interesting and valuable data and information.

I know that not the least valuable additions are destined to emanate from this section, as it has fully demonstrated its capabilities in the past and its possibilities for the future. All the members are good, honest, indefatigable workers to whom "there is no scientific religion higher than the truth," and who are determined to do that which lies in them to their fullest capacity to further the interests of dermatology and more particularly to place in that position which properly belongs to it, American dermatology, whose contributions are daily adding much of value to the general stock of information and knowledge. In closing, permit me once more to thank you for the honor you have conferred upon me in electing me your presiding officer for this meeting.

NEURASTHENIA.*

SECOND PAPER.

By C. H. Hughes, M. D., St. Louis.

IT is too late in the day of medical advance for the general practitioner to successfully assail the legitimate specialties in practice. The general practitioners and the specialties have fought this fight to a finish and the former have failed in the contest. Certain specialties in medical practice have come to stay and the general practitioner and his rapacious brother, the surgeon, who would like the earth and the fullness thereof for their field, may as well reconcile themselves to the inevitable and accept defeat gracefully.

This is the age of specialization in every department of human endeavor, and neurology is no exception to the now accepted rule of practice, though the neurologist is more dependent on the general practitioner for his practice than are the other specialties, since he can in many instances only take what the latter is willing to surrender for better treatment, for the reason that nervous diseases are often obscure, the patient does not discover a nerve trouble as he may an eye, ear, skin or throat disease, many of these even being nervous, and the general practitioner does not always recognize them, and when he does, is either not willing to acknowledge his lack of ability or facilities for treating them.

Many nervous diseases require pains, perseverance, patience and perfect regularity and system in their management, and often isolation from their families and change of environment, so that the burden of a neural habit may be lifted and an accustomed strain removed.

* Read before the St. Louis Medical Society.

The nervous system suffers more than any other part of the organism by the stress of life's duties, demands and dissipations.

Ordinarily when a patient finally reaches the neurologist, the family physician has tried his art and failed, and then if the neurologist, as a last resort, also fails to cure the incurable nervous disease, he is sometimes generously reproached for lack of skill, and then the proclamation is rantingly made that these nerve cranks are no better than, ~~or~~ not so good as, the family physician. The family physician, you know, knows his patient, knows how to unload his liver, relieve his constipation, flush his kidneys, appeal to the emunctories generally, replenish the blood, remove the vicious autotoxic excretions, tone up the system, etc., things of which, in the flush of the general practitioner's all-around confidence in himself, he imagines the neurologist knows nothing, overlooking the important fact that the neurologist is an evolution from the general practitioner, growing out of the imperative clinical and therapeutical necessity of the present unprecedented advance in medical science, for specialized research and particularly for specialized work, and cannot properly differentiate a disease of the nervous system without general clinical experience. He must know what the general practitioner knows about diagnosis and something more in his special field of work. It is an utter impossibility, in these days of extensive clinical research and multiplied medical resource for one man, even the greatest among physicians, to so master all as to be of the best service to the people.

This is apparent to the people and no longer disputed by the profession in regard to the specialties of ophthalmology, otology, rhinology, gynecology and certain special divisions of surgery, because the public can, in regard to these, discern their needs and knows when to apply for these special manipulations for which the general practitioner has neither adequate nor the necessary, appliances always. The fact need only to be stated to

be conceded that the resources and armamentaria of medical practice are now too extensive and numerous for one man's time or skilled capacity, to say nothing of the specialized clinical study required. Neurology is unfortunate in being more dependent on the general profession than on the public. The people diagnose their own cases when their eyes or ears or throat are out of order and often go to specialists in these diseases for relief of ailments for which the family practitioner has both the skill and the resources of treatment. He frequently goes to the eye, ear, nose and throat specialist too soon, while he often goes too late to the neurologist, because the general practitioner is too tardy in sending him. There are also cases that come to the neurologist, that need rather the family doctor, but from the ordinarily obscure nature of nervous diseases, this does not so frequently happen as in the other instances, for the obvious reason referred to.

But it is futile to have a fight in our own ranks on this subject, while a wondering public looks on surprised at our mutual reproaches, and even smiles at our sometimes ridiculous criminations and recriminations. There is no help for this state of affairs but to mutually tolerate and support each other. The remedy is for the general practitioner to limit his own practice and learn what can be done by specialism so as to be a judicious and safe family adviser, successful in what he undertakes to personally treat, and wise in his counsel as to what specialist his patient should consult.

A fruitful field for family consultants is opening and the general practitioner who does not see the signs of the times and recognize the changed order of things will be relegated to the realms of old-fogyism in the field of practical medicine.

There will always be plenty for the practitioner in families to do, more in fact under the new arrangement than under the old, for he will then do his work more thoroughly in the management of the fevers and cli-

matic diseases of his locality, the toxic inflammations, the acute constitutional and local diseases that do not involve the system in a chronic way and require long and patient applications and special dexterity in diagnosis and trained manipulation. The *tactus eruditus* cannot possibly be acquired and employed in the application of electricity, general and special æsthesiometric, dynamometric, cephalic, thermometric, ophthalmoscopic, otoscopic, laryngoscopic examinations and endoscopic explorations—cystic, gastric, etc., to say nothing of the often necessary microscopic, urinary and bacteriological investigation.

We all know something about all these. Some of us are especially expert in some of these things, but if we were all expert in all, we could not find the time to employ our expertness in all. We could not practice with them all.

The general practitioner would find little time to go out and see patients who summoned him in emergencies, if he had only the office armamentaria of diagnosis and treatment of the practicing neurologist and a reasonable number of patients to treat. Such a practitioner in his attempt to treat every disease in the category of human ills would find himself obliged to manage neurasthenia as he understood it, but not as the neurologist sees it, with remedies to arouse the liver, start the secretions, remove waste products, etc., only, a very good practice and one the skilled neurologist never ignores when the liver needs arousing or the autotoxic products of disintegration need to be washed out of the system, but he could not find the necessary time for the systematic application of suitable electrizations, if from his standpoint so simple (?) a disease as neurasthenia should require electricity. But he seldom concedes this until after his process of correcting the secretions, improving the nutrition, enforcing sleep with hypnotics, etc., has failed and the despairing patient, suspecting it is his nervous system that is the trouble, finds a neurologist

who will be patient and perservering with him and win his confidence by patiently employing electricity in such a way as to give a sense of temporary comfort and rest, and finally to restore the irritable and unstable nerve centers or peripheral nerve endings that have made life a burden and a misery through the many points of irritation, the perverted functions of the several organs from the brain to the spinal cord, from the apeptic stomach, atonic colon and other intestines, the torpid liver and skin and irritable bladder; if in a woman, that vicious circle of morbidity beginning in spinal tender spots, going thence to the ovaries, heart, liver, stomach, bladder, kidneys, bowels or brain, and around again over and over, traversing the vicious circle and securing for its victim at times the most vigorous and radical local treatment according to the localizing bias of each particular practitioner.

It gives rise to fluxes of mucous surfaces through vasomotor failure, often treated as causes, such as nasal and intra-uterine catarrh, leucorrhea, etc., and fluxes of blood, such as menorrhagia, often treated as causes and always acting as aggravating conditions, and anæmia, oligæmia or hydræmia and other forms of poverty of blood, which may also act as causes where the neural predisposition or diathesis exists. But if the nervous system and the blood corpuscles are inherently highly developed and are able to readily supply from their own inherent strength and to appropriate from the nutritional ingesta the force that counterbalances the waste of action, neurasthenia does not take place under the severest wear and tear of life, but balances nutritional appropriation and demand, and the organism continues its action physiologically, meeting the disintegration of duty demanded of the psychical centers of the brain and lower physical centers of the cord with correlative re-integration. The neurasthenic, after prolonged exertion of mind and body, becomes restless and less capable of restful recuperation than the physiologically better

endowed. When work is ended with the physiological nervous organism, rest follows prolonged to the extent of the system's needs for recuperation. With the neurasthenic, irritability,—psychical and spinal,—and this brings inability to properly sleep and rest,—insomnia, morbid fears and other evidences of brain unrest and restlessness appear and inability to sit or lie quietly and other signs of morbid nervous exhaustion in the lower centers of the cerebro-spinal axis appear. The fatigue of the neurasthenic is not physiological. It is morbid, hence the difference in its manifestation from that of normal nerve or muscle tire.

So health is maintained under the severest of life's burdens and strains, and the battle of life is fought to a successful close, when nature in obedience to the fiat of inexorable law withdraws the combatant from the field, retires him from active duty in old age, and new and younger individuals take his place to continue man's never-ending struggle for existence, and the survival of the fittest individual and generation.

In controverting the view that anæmia is the cause of neurasthenia, I do not mean to assert that such a state of the blood has no influence upon it, or that it may not result from toxæmia, as from tobacco, the poison of typhoid, malaria, etc., but such would not be primary neurasthenia.

Neurasthenia is a peculiar congenital or slowly acquired constitutional tendency of the nervous system to act in a peculiarly irritable, tired or exhausted and unstable manner, under conditions of over-mental strain. It is a chronic disease, never acute. Conditions which acutely simulate it are only normal weariness and muscle tire or neural toxicity. It may follow the *grippe* or typhoid or the use of tobacco. Under its presence, various organs show functional disorder, due to atonic nerve conditions or absence of proper nerve influence. Irregular heart movements appear, without structural change, dyspeptic symptoms set in without organic disease of the stomach, constipation,

not dependent on wrong conditions of the excrementitious products in the alimentary canal or other causes, but due to atonicity of the muscular coats of the *prima via*, insomnia without other adequate cerebro-mental causes harasses the patient, paræsthesias and conditions simulating the neuritides, hyperæsthesias without proven toxicity of blood, peculiar mental symptoms, singular morbid fears, dreads, hypochondriacal feelings without sensible disease of the brain to account for them, timidity, irresolution and other feelings not natural to the person, are likewise prominent head symptoms. I was the first writer, to my knowledge, to state this fact that timidity and irresolution not natural to the individual was a characteristic symptom of this unstable nervous condition and was the foundation of the several morbid fears which distress these patients (*vide* ALIENIST AND NEUROLOGIST, Vol. III., page 411).

Neurasthenia is not always hereditary. It may be acquired in the individual by prolonged brain strain, but never suddenly. It is brain fag carried to the point of that profound exhaustion in which the balance cannot be maintained between waste and repair nor readily restored. It is not an acute affection, though acute and powerful brain strain may re-awaken it into activity in the constitutionally predisposed. It is not ordinary nerve tire excited by sudden causes of depression from mental fatigue or muscular exhaustion, or from toxic conditions resulting from uneliminated products of tissue destruction. It is not a spasmodic neurosis like hysteria, chorea, epilepsia, etc., though these states may become engrafted upon it, and are sometimes, though exceptionally, found to follow it. It is rather a conservative neurosis, saving its subjects, like migrain, from the graver forms of neuropathic breakdown by functional conditions of irritability and instability, which make the further endurance of the profounder strain of the nerve centers, that leads to organic disease of the nerve centers of the cerebro-spinal axis, an impossibility. This is the reason that greater

longevity belongs to neurasthenics than to epileptics and the victims of softening and sclerosis, etc. The neurasthenic fails with functional exhaustion, but seldom goes further. He is generally younger-looking than his actual age would imply. Under mental or physical strain he easily collapses and under proper management recuperates until a renewed strain is put upon him, when he collapses again and becomes nervous, irritable, timid, irresolute and takes up again his morbid fears and must relinquish whatever mental burden he essayed. He becomes tormented with his characteristic timidity. Insomnia haunts him, dyspepsia distresses him, constipation and pains annoy him, but he does not break down with irremediable organic conditions like Bright's disease or cerebral softening or the structural changes of sclerosis. And here I do not at all concur with Arndt, in his "Dictionary of Psychological Medicine" article on this latter subject. I do not see how any man of extensive clinical experience in this disease, could make such a statement. This appears to be merely a theoretical assertion, not based on observed fact. I have never seen neurasthenia merge into sclerosis, either disseminated or systemic. He may become melancholic, but he is less liable than others to have acute mania, but he may reach the latter conditions, if the pressure his brain cannot bear is further forced upon him. Acute delirious mania, which is largely a functional insanity, may follow nervous exhaustion.

Neurasthenia is a condition in which the entire neural organism may be involved. It has no characteristic local lesion, no *fons et origo* in a special part, as hysteria so often has. Its manifold disturbances are very different from hysteria, though the latter is often confounded with it, as it may be engrafted upon it in the specially predisposed, as is exceptionally the case with epilepsia, chorea and paralysis.

There is a constance and persistence in the symptoms of neurasthenia which contrast markedly with the inconstancy,

the paroxysmal and spasmodic character of hysteria. The aphonias, the comas, stupors, tremors, vomiting, aphasias, monoplegias, the globus hystericus and other symptoms that come and go in hysteria, the contractures, paralyses, spasms, hemianæsthesias, lethargic, cataleptic convulsive states and stigmata of hysteria, are not common to neurasthenia, nor do we find hysterical or psychical blindness or *Seelenblindheit* in neurasthenia, neither is the same craving for attention and sympathy and semi-volitional exaggeration of symptoms characteristic of neurasthenia in hysteria. The inconstancy and variableness of the hysteric's symptoms are in keeping with her mental instability and capriciousness. This contrasts with the steady, persistent, constant wretchedness of the neurasthenic. He is weak and miserable, but not perverse, as the hysteric is. Neurasthenia enlists the sympathy of the non-professional observer, hysteria often excites his disgust or provokes laughter. There is an appearance of reality in the symptoms of neurasthenia, while an appearance of shamming is characteristic of hysteria.

Such is neurasthenia as I have seen it, with the further descriptions given in my previous papers and the further descriptions of other writers on the subject.

I was prepared for a variety of views as to this disease and doubts of its existence from general practitioners, who have so many diseases, old and new, to study, that more than a cursory knowledge of its distinctive symptom grouping would not be expected of him. But I was not prepared to hear a denial of its existence *in toto* come from a distinguished brother neurologist.

Hysteria is a morbid state of the nervous system in which perverted feelings and ideas and impulses which spring from them control the patient in a paroxysmal and *bizarre* manner, not continually, as in the melancholia or depression of neurasthenia. Hysteria is recurrent then and paroxysmal. Neurasthenia is continuous and progressive.

It is like acute delirium in its relation to insanity. The patient may be aroused to a sense of propriety and a proper appreciation of his surroundings and his relation thereto. There is no globus in neurasthenia; nor hyperpyrexia, as in hysteria. The peculiar atonic voice of neurasthenia is not a characteristic of hysteria, such as we note in failing orators and queens of song when from over nerve strain they become neurasthenic. As the tone and timbre of the voice are delicate indices of the soul, so they sometimes tell the neurologist a tale of neurological woe. The voice is in sympathy with the tone of the cortex and the pons.

The pistol shot or explosive sounds in the head do not belong to hysteria, nor does the habitually unstable neurasthenic asthenopic eye.

The characteristic inattention in reading and inability to fix the mind on anything, peculiar to advanced neurasthenia and the aversion to all customary literary or other tasks of the neurasthenic, is not a characteristic of hysteria, nor is what Beard calls heterophony, *i. e.*, meaning one thing and saying another, a sign of hysteria as we find it in neurasthenia. Neither does the frequent facile flushing of the neurasthenic characterize the hysteric. The most typical forms of neurasthenia are found in men, while as its name implies, hysteria is chiefly found in women.

In view of these marked differentiations and the well known fact that any nervous disease may be engrafted on a condition of nervous debility, I cannot comprehend why some clinicians and writers should seek to rule out neurasthenia from the list of morbid entities, simply because another morbid state may follow it and become associated with it in the same organism.

Such reasoning would simply rule out almost all differentiations and unify all the nervous affections.

But Dr. A. C. Wood regards it, notwithstanding, as "a bodily condition which is frequently associated with various chronic disorders and not rarely co-exists with

perverted nerve functional activity of the nervous centers, which perverted nerve functions may, however, exist independently of any perceptible neurasthenia, and not simply the outcome of neurasthenia." He regards it as "an habitual foundation for hysteria, chorea, insanity and various nervous diseases," but concedes that it "may exist without the superaddition of any of them." This concession concedes the claim of those who believe in the existence of neurasthenia as a distinctive functional pathological condition.

While Wood says neurasthenia is "an habitual foundation for hysteria, chorea, insanity and various nervous diseases," he concedes that "it may exist without the superaddition of any of them." Then what is it?

"The onset of neurasthenia," he says, "is always gradual," and this is the fact. Is this ever so with hysteria? He quotes from the late Samuel Jackson, of the University of Pennsylvania, the forcible expression:

> Whenever the expenditure of nerve force is greater than the daily income, physical bankruptcy sooner or later results.

Dr. Wood, says:

> The nerve capital of persons differs almost as widely as does their moneyed capital. There are numerous families, many of whose members are neurasthenics from birth—*i. e.*, are born with less power of creating nervous energy than is necessary to meet the requirements of the ordinary duties of life. There is every grade of natural endowment between the most feeble person, scarcely able to produce more nervous energy than is necessary for breathing, eating and drinking, and the organism that is capable of enduring incessant toil. The development of neurasthenia is therefore not so much the result of a strain which is absolutely great, as of a strain which is excessive in its relations to the organism which has to bear it. I have seen not a few cases in which the neurasthenia has appeared to me to be an expression of premature old age. In such cases the rigid, atheromatous radical arteries occurring in a non-gouty or non-syphilitic subject have pointed to a similar excessive ripeness of tissue throughout the body.

Thus this author who cavils at the term, unwittingly concedes the existence of the clinical fact for which we are contending, and this is the case with all like him.

Arndt, who has written the article, "Neurasthenia," in Tuke's Dictionary of Psychological Medicine, reasons in the same way, after falling into the error of all German writers, including Hirt, however, who takes a correct clinical view of this subject, that Beard invented the term.

Now if neurasthenia should be expunged from our clinical nosology because hysteria may proceed from it, why not abolish the term hysteria because insanity may proceed from it, and epilepsia and chorea and puerperal eclampsia and even typhoid fever. Insanity, in grave form, may proceed from all of these diseases. This morbid condition has been ignored by other writers, Gowers among the number, but Charcot and his followers, and the neurological giants of Germany and the *savants* of England, Italy, Russia and most American writers, have acknowledged the appropriateness of the term and conceded the existence of the morbid condition as worthy of distinctive designation.

The right of a newly described disease to a place in the nosology will always be for a time disputed by those who wish to keep the nomenclature simplified, and neurasthenia has been denied a place in clinical medicine mainly because it has no discoverable pathology, but this is a futile argument no more applicable to the subject under consideration than to hysteria or chorea, etc. When the old humoral pathology yielded to the pathology of the solidists, no disease was conceded the right to be, and be named unless it had a local origin, and certain general practitioners cannot accept neurasthenia, except as a sequence to blood-change or as symptomatic of organic disorder, and some few neurologists still think it should have a distinctive portion of the nervous system for its own, like the systemic nervous diseases, and an established underlying pathology (which it certainly has, though not proven to their satisfaction in neuratrophia) before conceding to it what they have conceded to other less definitely defined functional conditions of

the nervous system, viz., the right to a distinctive place and nomenclature in clinical medicine.

If we look back from the first American contribution of Van Deusen, of Kalamazoo, Michigan, in 1867, before the first treatise of Beard appeared, to the researches and discoveries of the masters in medicine of the past, we may discern that neurasthenia is an evolution, for long before neurology had risen to the dignity of the most exalted specialty in medicine and the neural pathology had become paramount as it is now being recognized in medical thought by all advanced and advancing clinicians (for there can be no recognizable disease except through altered function, when the nervous system has yielded to its causative influence), glimpses of neurasthenia had begun to dawn upon the horizon of medicine, and those who first discerned it were general practitioners who practiced as best they could over the whole field, not then so broad as now, but broad enough then to tax to the utmost the powers of observation and the resources of the best minds of past generations.

SOME SURGICAL SINS.*

By John B. Roberts, A. M., M. D., Philadelphia.

A VERY significant fact in the surgical literature of recent months has been the evidence of reaction against an over-hasty adoption of operative methods of treatment. The general conviction of the relative certainty with which operative attacks could be freed from septic consequences quickly bred a crop of surgeons whose surgical learning scarcely kept pace with their operative zeal and the force of whose dogmatic assertions was only equaled by their rapidity in publishing tables of cures.

The low death rates of the new surgery made such a contrast with the mortalities recorded in accepted text-books that the men who believed the new gospel—naturally the young—were enchanted by the safety with which they could operate for conditions that older and more cautious surgeons hesitated to so treat. Many of us have stood appalled at the temerity, and astonished at the pathology, of these operative members of the profession. An omen of true progress can be seen in the tendency of even these to so restrict the use of the knife, and to reflect that the true surgeon must have accurate pathologic knowledge and good surgical judgment as well as operative dexterity. Of what advantage is it to a patient to undergo an operation, within the scheduled number of seconds, or with the loss of the promised minims of blood, if the operation was not demanded? Who cares whether he carries a scar one or two centimeters in length, if he could have been equally well cured without scar, and without the necessity

* The Chairman's Address, read in the Section on Surgery and Anatomy at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894.

and expense of a surgical procedure? "Look at the dozens of operations done by me this year without a death," says the operator. His less enthusiastic neighbor thinks of the proverbial kinds of falsehoods, "lies, damned lies, and statistics," and replies: "Reports of large numbers of cases subjected to operation seldom fail to beget a suspicion of unjustifiable risk."

It seems to me that a revival of learning in surgery is upon us, a going back to the study of etiology, symptomatology, diagnosis and treatment, destined to restrain unseemly haste in adopting the scalpel as a panacea. If my observation of late events has been correct and unprejudiced, the operative madness has usually, though not always, been endemic among those whose preliminary educational training has been circumscribed and whose medical study and experience have been in one field rather than in all. Dogmatists in science and in religion are most usually found among those of limited scientific and worldly knowledge. No one will deny the assertion that the best professional judgment would be found in a man who successively had had years of medical, surgical and special experience. The present breadth of medical science prohibits such experience in a human life; but the nearer a physician attains it the more valuable is he to the community.

The exaction of preliminary education, the lengthening of college courses and the association of doctors in meetings, such as this, are the correctives which will cure the specialist of his egotism, compel the conservative to know the value of new things, and drive the sluggard and ignorant to his medical journals and books. A true surgeon cannot lack broad culture, modest self-denial, accurate judgment and unselfish regard for his patients.

This at least was the opinion of Thomas Vicary, Sergeant Chyrurgeon to Henry VIII., who well tells us "what properties and conditions a man must have before he be a perfect Chirugion." His advice in 1577 may

well be studied in 1894. "The first (I sayde) he ought to be learned and that he know his principles, not onely in Chirurgerie but also in Phisicke, that he may the better defende his Surgery: Also he ought to be seene in Natural Philosophie, and in Grammer, that he speake congruitie in Logike, that teacheth him to proue his proportions with good reason. In Rethorike, that teacheth him to speak seemely and eloquently; also in Theorike, that teacheth him to know thinges naturall, and not naturall, and thinges agaynst Nature. Also he must know the Anatomie, for al Authors write against those Surgions that worke in man's body not knowing the Anatomie, for they be likened to a blind man that cutteth in a vine tree for he taketh more or lesse than he ought to doo. * * *

"The ijd, I said, he must be expert: For Rasus sayth he oughte to knowe and to see other men work and after to haue vse and exercise. The thirde, that he be ingenious or witty: For al things belonging to chirurgerie may not be written nor with letters set foorth. The fourth (I sayde), that he must be wel manered, and that he haue al these good conditions here following:

"That a Chirurgion must take heed he deceiue no man, with his vayne promises, nor to make of a smal matter a greate, because he woulde be accounted the more famous. Likewise, they shal geue no counsayle except they be asked, and then say their aduise by good deliberation, and that they be wel aduised afore they speake, chefly in the presence of wise men. Likewise they must be as priuie and as secrete as any Confessour of al thinges that they shal eyther heare or see in the house of their pacient. * * * And see they neuer prayse them selues for that redoundeth more to their shame and discredite than to their fame and worship. For a cunning and skilfull Chirurgion neede neuer vaunt of his dooings, for his works wyll euer get credite ynough. Likewise that they despise no other Chirurgion

without a great cause. For it is meete that one Chirurgion should loue another, as Christe loueth vs al."

John of Arderne, who wrote two hundred years earlier than Vicary, appears to have been familiar with some of our nineteenth century tendencies. He was a specialist and, in accordance with the inherent tendency, wrote a treatise on anal fistula. After detailing the names and addresses of his patients and giving his own residence, he says, according to a fifteenth century translation of his Latin monograph:

"All these foreseid cured I afore the makyng of this boke oure lord Ihsu ye blessid God knoweth that I lye no*gh*t. And therefore no man dout of this thof although old famous men and ful of clere (renowned) in studie haue confessed tham that thei fande nat the wey of curation in this case; for God that is deler or rewarder of Wisdom hathe hid many thingis from Wise men and sli*gh*e (cunning) which he vouchesafeth afterward for to shewe to symple men. * * * Therefore I pray that the grace of the holy gost be to this werke that he vouchsaf for to spede it; that the thinges whiche in wirking trewly I am ofte tymes experte I may plenevly (fully) explane tham in this litel boke. It is lefull forsoth for to sey that (what) is knowen and for to witnes that is seene.

"And this I sey that I know no*gh*t in al my tyme ne heard no*gh*t in al my tyme of any man nother (neither) in yngland ne in partiez biyonde the see, that kouthe cure fistula in ano outake (except) a frere minor that was withe the prince of Walez in gascon and gyan (Guienne) whiche rosed and bosted hym that he had cured the forseid sekenes. And at london he deceyued many men. And when he mi*gh*t no*gh*t cure som man he made suggestion to tham that no man mi*gh*t cure tham and that affermed he with swearing that yif the fistule was dried that the pacient at the next schuld no*gh*t eschope dethe whiche forsoth ylefte and forsake of hym I cured perfitely."

Notwithstanding this author's characteristic vaunting of his own special skill he appears to have been too wise to speak against the general practitioners, for in his book on "Ye manere of ye Leche"—"the Conduct of the Physician"—he gives this advice:

"He that skorneth other men shal not go away vnskorned. Yif ther be made speche to hym of any leche nouther sette he hym at nou*gh*t, ne preise hym to mich or commende him but thus may he curteysly answere, I haue no*gh*t eny knowleche of hym, but I lerned no*gh*t ne I have not herd of hym but gode and honeste; and of this shal honour and thankyngis of eche party encresse and multiplie to hym; aftur this, Honour is in the honorant and no*gh*t in the honored."

The cultivation of a habit of accurate statement, as well as of observation, would save many of us from criticism and teach us to be cautious about criticising others. Mr. Charles A. Dana, in a recent address on journalism, insisted that the faculty of seeing a thing as it is was one of the most precious ends of a good education, and advised newspaper men to tell what they knew accurately and without exaggeration or prejudice. It is usually a habit of inaccurate statement which impels a surgeon to say that an important operation is absolutely safe; and then calmly report a list of such cases containing several fatal operations. The surgeons who open an abdomen seven or eight times are almost as certainly lacking in judicious and accurate study of symptoms as the woman who permits it is ignorant of surgery. Yet a patient recently requested abdominal section at one of the hospitals with which I am connected, saying that she had already been subjected to seven such operations. I would think her statement untrue if my ears had not heard and my eyes seen similar things.

Due regard is not given by us to the influence of the nervous system upon the health. Many patients can be cured, by medicine or psychic remedies, of symptoms which would induce some surgeons to resort at once to

mutilating operations. This statement does not apply alone to pelvic conditions but to affections of joints, muscles and viscera. My experience at the Woman's Hospital in Philadelphia, and in private practice justifies this assertion.

I am impelled to believe, though I dislike to do so, that the establishment and personal control of private hospitals by surgeons is a distinct evil. Such institutions seem, to me at least, to tend to warp the judgment; and make the surgeon's prospective income somewhat obscure the correct view of the patient's good. Practically it is rather difficult for a doctor to keep a hotel for patients without having his professional ethics a little blunted by a hotel proprietor's proper desire for many and long-staying patients. I regret that our human nature is liable to be thus tainted, because surgery can be better done, and sometimes more cheaply done, in a hospital than in a patient's home. I am convinced, however, that the truest ethical spirit is not developed by these private hospitals maintained for the pecuniary and professional advantage of one man. While some may do no harm, many tend to develop selfishness, theatrical operations, and a mercenary spirit foreign to the highest type of surgeon. I confess a similar distrust of private and corporate sanitaria. I know they frequently do much good for invalids, but the bestowal upon physicians by some of these institutions of shares of stock, proportionate to the number of patients sent for treatment, does not increase my confidence in the system.

Demanding unusually large fees for professional services is a surgical sin, which the increasing number of skilled surgeons is happily correcting. To send a bill for a large amount simply because the patient is wealthy does not appear to be just, and to obtain money because the patient is in fear of death and dares not employ a less expensive attendant makes one think of the methods of the footpad who demands your money or your life. A high degree of skill and heavy professional responsibility

undoubtedly deserve adequate pecuniary recognition, but the true surgeon will always recollect that practicing surgery for money alone degrades a noble profession to the level of a trade.

Declination to see a poor patient with a practitioner who desires the advice of a consultant is a similar wrong. Our common brotherhood teaches us to charge no fee for attending another doctor and his family. It is just as imperative that we go to his help when an obscure case gives him anxiety. A surgeon who will not aid another with his counsel because the patient cannot pay the regular fee is a poor representative of the medical guild. Equally censurable is the hospital surgeon who allows insignificant causes to keep him from formal consultations called by his colleagues.

Not less destructive to the purposes of scientific surgery is the use by many surgeons of secret nostrums. While many of these may have active ingredients, their use is unscientific and unworthy of us, because we have no knowledge of their *exact* composition, and hence cannot treat our patients with accuracy and precision. A distinguished English surgeon once said: "The glory of surgery is precision." Very little precision characterizes the methods of the nostrum-employer; hence his surgery is usually far from glorious. Dr. J. T. Graham, of Virginia, has justly said on this topic: "Whenever a physician becomes too negligent to study his cases and prescribe well-known and tried remedies for definite pathologic conditions, he is no addition to his profession. As long as pure drugs are manufactured, as long as scientific works on materia medica and therapeutics are written, as long as ample facilities for acquiring a knowledge of medicine exist, there is no excuse for the physician acquiring the habit of prescribing patent medicines."

Acromegaly, Treated by Desiccated Thyroid.*

A CASE RECORD.

By Solomon Solis-Cohen, M. D., Philadelphia, Pa.

THE patient, who was fifty-two or fifty-three years of age, had applied to the Philadelphia Polyclinic about eighteen months before for relief from an excruciating headache, which had for many months been so intense at times as to prevent his lying down, pressure on the scalp increasing the pain. Attention had at once been attracted to the peculiarities of the facial structures presented, and further examination had demonstrated the characteristic curvature of the back and enlargement of the hands and feet. Photographs of the patient, taken twenty years before and six years before respectively, bore out his statement that his features had materially altered within the last four years, although the later photograph showed the beginning of the change.

He had had to enlarge his hat-band twice and his shoes twice within three years. The shoes were a little longer but much broader than formerly. The hands were broadened rather than lengthened; the fingers not exactly "sausage-shaped," but thick and clumsy. Distortion of the joints was to be attributed to his occupation, and probably antedated the development of the acromegalic conditions. Part of the coarseness of the skin of the hands might likewise have been due to occupation. His hands to-day, however, were smaller than when he had

* Presented to the College of American Physicians and Surgeons, at the late Third Triennial Meeting at Washington, May 29th. (Abstracted from "Proceedings" for the Alienist and Neurologist.)

first come under treatment, as shown by the tracings and measurements, and also by his statement that a pair of gloves bought some years before, which had been too small for him last year, could now be worn.

The enlargement and projection of the superciliary ridges, the lateral projection of the malar bones, the broadening and deepening of the chin, gave the face the characteristic lengthened elliptical outline. The great enlargement of the nose, the thickening and projection of the lips, the heavy folds, the deep furrows, and the somewhat greasy texture of the skin, especially of the forehead, the stiffening and projection of the auricular cartilages, completed the picture. The lower jaw did not, however, project beyond the upper jaw. The teeth were bad. The tongue was thickened and deeply fissured. The voice was deep and had a monotonous quality, the latter only partly attributable to his "boilermaker's deafness." The laryngeal and tracheal cartilages were almost, if not completely, ossified. The thyroid gland could not be demonstrated. The forward thrust of head and neck from curvature of the cervico-dorsal spine threw the clavicles well out from the windpipe, leaving a great hollow just above the sternum. The clavicles were enlarged, the scapulæ were enlarged, the ribs were broadened and apparently in contact, and the costal cartilages seemed to be ossified. In consequence, although the narrowing of the chest—an apparent lateral compression —and the percussion phenomena showed absence of emphysema, it would be observed that his breathing was scarcely at all thoracic. There was an almost inappreciable rise and fall of the clavicles, showing slight vertical motion of the thorax as a whole, and, on great inspiratory and expiratory exertion, an expansion of a half to a centimeter could be determined at the nipple line. Breathing was almost exclusively abdominal. This showed, as did his previous case, and some cases of Dr. Dercum's and others, that the disease involved the bones of the thorax as well as those of the extremities.

The patient was becoming feeble; his muscles were wasting, though as yet electric examination showed only quantitative change.

He had vasomotor phenomena—flushing, occasional vertigo, and polyuria. The urine had been deficient in solids, but had not contained sugar or albumin. We had not, indeed, demonstrated anything abnormal in it. This he attributed, however, to defective methods of examination. He had no doubt that careful chemical analyses would show in the urine the results of altered metabolism. Since treatment with thyroid powder had been instituted the quantity of urinary water had decreased and the urea content had risen. Ordinarily the thyroid preparation increased both water and solids. Superficially the diminution of polyuria by a diuretic would seem to be an illustration of the so-called "homeopathic law." A moment's reflection, however, showed the action to be simply a correction of disordered metabolism, through which the production of toxines giving rise to polyuria was diminished. Another result of the administration of the thyroid powder had been to completely relieve the distressing headache.

At one time, after a long absence from the clinic, the patient had returned complaining of violent sciatic pain. It had failed to yield to ordinary measures, but had disappeared after recourse to thyroid medication. Five grains of the preparation of desiccated sheep's thyroid (exhibited by the author to the society last year) had been given in capsule every morning.

Upon the somnolence, however, no effect had been obtained. The patient could still go to sleep upon the slightest provocation—indeed, without any. He had fallen asleep while awaiting his turn at the dispensary, and had frequently missed appointments through sleeping in his chair over the time set. He said that he could keep awake, however, while at work; but as he could no longer do the hard work to which he had been accustomed, he had not for some time had steady employment.

Dr. Jackson had examined his eyes, and had found no lesion of the fundus and no error in the visual field. This went to confirm the view that hemiopia and other visual errors were merely secondary phenomena, due to pituitary enlargement, and that the latter was not necessarily a feature of the pathologic complexus. The speaker was inclined to believe that early treatment with thyroid preparations would entirely prevent overgrowth of the pituitary body, embryologic analogy seeming to indicate that it was an attempt at compensatory hypertrophy, ill-directed and baneful only by reason of the altered position of the structure.

SELECTIONS.

NEUROPATHOLOGY.

Rheumatic Nature of Chorea.—Before the Eleventh International Medical Congress of Rome, Sir Dyce Duckworth read a paper with the above title, a summary of which is here presented:

Chorea is not only related to rheumatism, but is itself a variety and a manifestation of this disease.

It is a form of cerebral rheumatism, representing one of the many extra-articular varieties of this disease.

Lesions may be found in the heart and in the brain, and, as far as we can say to-day, the cortical region is the part involved.

It is impossible to distinguish, during life or after death, any difference between the endocarditis due to rheumatism and that which is supposed to be due to chorea.

Shock, mental overwork, or physical emotion, are the causes ordinarily producing chorea, but these can give rise to the disease only in children who have inherited the rheumatic habit.

The symptoms of chorea point to the action of certain systemic poisons, and, as these have been shown to be the efficient cause of rheumatism in about eighty per cent. of all cases, so we ought to conclude that they are the efficient cause of all cases of chorea, or that at most in a small percentage the disease results from the action of some other toxic substance having a remarkable affinity to the rheumatic poison.

As the manifestations of rheumatism are now clinically recognized in parts of the body other than the joints, so chorea may be considered as a variety of rheumatism specially affecting the brain.—*Medical Age.*

Traumatic Neuroses Sui Generis no More.—The so-called railroad-brains and railroad-spines exist no more as "neuroses sui generis." According to Dr. de Jacobson (*Copenhagen Hosp. Tid.*, 20 Sept., '93), Oppenheim the father of "traumatic neuroses sui generis," has

yielded to the philosophical deductions of Charcot, Gilles de la Tourette and others of the Salpêtrière school, and has abandoned that subject in his new book on nervous diseases. In other words, the French school has convinced the German school that neurotic disturbances following railroad accidents are not "traumatic neuroses sui generis" (new nervous diseases), as taught by Oppenheim, but that the shock attending railroad accidents simply brings forth the ordinary symptoms which manifest a neurotic diathesis, seldom the more profound, such as paralysis agitans, epilepsy, disseminating sclerosis or insanity, but nearly always hysteria or neurasthenia, or the two combined. Page, in his latest work on injuries of the spine and spinal cord and nervous shock, supports the French school. This must be quite a shock to Knapp, Clevenger and other American railroad surgeons, who so loudly supported Oppenheim, to find that after all there is nothing "sui generis" about railroad injuries. But then this will hardly put an end to lengthy papers on that subject in this country.

The Etiology of Headache.—Dr. S. Vermel (*Revue Generale de Clinique et de Therapeutique*), after a thorough study of the subject, says that he is inclined to attribute all headaches to an oversensitive condition of the sympathetic nerves controlling the peripheral vessels of the cranium and brain, or to an angioneurosis. It may be asked at once, he says, how the same symptoms, from the same cause, can be present in diametrically opposed conditions, such as plethora and anæmia, febrile and apyretic diseases, for example. The idea that the seat of pain is in the cortex has not been substantiated, for when a cortex is irritated there is locally only an hallucination of pain; the real pain is exhibited on some part of the body. Then if the attack of cephalalgia is not due to local irritation of the cortex, the seat of the trouble must be in the meninges. It is to dilatation of the vessels of the meninges, causing intracranial-pressure, that the pain is due. The vascular dilatation extends to the minute blood-vessels in the region of the pituitary body, rupture of which gives rise to the epistaxis from which patients so frequently suffer during an attack of headache. It is clear how this explanation answers for hyperæmic conditions, but how does it account for the same symptoms in anæmia? In anæmia there is a

qualitative and not a quantitative change in the blood, the amount of fluid in the vessels remaining the same. In veritable anæmia from excessive depletion of the system, as from hemorrhage or cholera, the condition is different; but from the anæmia coincident with neurasthenia, hysteria chlorosis, and so forth, there is, so far as quantity is concerned, the same condition as hyperæmia.

In anæmia the vessels are very prone to dilatation, producing an exaggeration of the intracranial pressure, in consequence of over-excitability of the vasomotor centers allowing of local hyperæmias.

The author definitely states that the seat of pain in headache is always in the dura mater and not in the cortex; that the pain is provoked by the compression of the dura mater produced by increased intracranial pressure; and that this is true of all headaches, whether neuroses, or of toxic or mechanical origin—such as diseases of the brain or of the meninges, constipation, etc., or of reflex origin.—*N. Y. Med. Journal.*

PSYCHIATRY.

Insanity from Alcoholism.—In a recent special report of the Inspectors of Lunacy in Ireland, twenty out of twenty-two medical superintendents of district asylums agree that, in their experience, the most prevalent cause of insanity, after heredity, is alcoholism. The proportion of cases of lunacy due to the use of alcohol varies from ten to thirty-five per cent. of the total admissions. The reports from two asylums pointedly refer to transformed inebriate transmission. The superintendent of one district asylum says that the offspring of inebriates are liable to many neurotic diseases, and of another that cases of epileptic mania have occurred among the children of inebriates.

NEUROSYMPTOMATOLOGY.

A New Symptom of Complete Facial Paralysis.—Goldzieher (Ber. web. d. 23te Vers. d., Oph. Ges., Heidelberg, 1893) describes as a new symptom of com-

plete facial paralysis, cessation of the secretion of the lachrymal gland. This gland has been supposed to be supplied by the trigeminus, but the author adduces cases showing not only that facial paralysis is accompanied by cessation of secretion, but also that stimulation of the facial has resulted in profuse secretion. Further, the complete removal of the trigeminus trunk with the Gasserian ganglion was not followed by alteration in the lachrymal secretion. In all cases of total facial paralysis with involvement of the soft palate, it was found that crying upon the affected side was impossible.—*Brooklyn Med. Jour.*

CLINICAL NEUROLOGY.

Spinal Sclerosis Following "Spinal Concussion."—Dr. Philip Coombs Knapp (*Boston Medical and Surgical Jour.*) reports two cases of unmistakable spinal sclerosis following "spinal concussion," and refers to other cases of chronic organic spinal diseases following upon injuries where the symptoms did not develop until long after the injury, and where the progress was gradual yet persistent to a fatal termination; tabes and spinal progressive muscular atrophy are the diseases specially referred to, although he mentions myelitis and spinal hemorrhage as resulting from concussion.

Dr. Knapp concludes: "From the evidence thus collected it becomes clear that the position taken by Watson and Page is untenable. There are cases where the symptoms are in large part, if not entirely, due to disturbances of the spinal cord, and where the cerebral and psychical factors may be eliminated. Changes occur in the cord from injury where there is no fracture or dislocation of the vertebræ, no crushing of the cord, no spinal hemorrhage, and where the vertebral canal is intact. Such changes, furthermore, may be of gradual onset, and symptoms may not develop for some time after the injury. As we know that severe cases occur with marked lesions in the cord, *post-mortem*, it is only fair to suppose that milder cases may also occur where there are less marked lesions in the cord, which either recover or persist, causing partial disability without a fatal termination."

KRAUSS ON THE DIAGNOSTIC VALUE OF THE TENDON REFLEXES (*The Buffalo Med. and Surg. Jour.*):

- Exaggeration of Tendon Reflexes.
  - Organic Disease.
    - Spinal Cord.
      1. Myelitis.
      2. Amyotrophic lateral sclerosis.
      3. Paraplegia spastica.
      4. Multiple sclerosis.
      5. Syringomyelia and hydromyela.
      6. Hematomyelia and hematorrhacis.
      7. Spinal tumors.
      8. Pachymeningitis hemorrhagica interna.
      9. Pachymeningis cervicalis hyper trophica.
      10. Brown-Séquard's spinal paralysis.
      11. Arthritic muscular atrophies.
    - Brain.
      1. Hemiplegia
         - Cerebral apoplexy.
         - Cerebral embolism, thrombosis.
         - Acute encephalitis.
      2. Hematoma.
      3. Hydrocephalus.
      4. Senile dementia.
  - Functional Disease.
    1. Hysteria.
    2. Epilepsy.
    3. Neurasthenia.
    4. Paramyoclonus.
    5. Tetanus.
    6. Psychoses.
    7. Infectious processes.

- Abolition of Tendon Reflexes.
  1. Neuritis.
     - Simple.
     - Toxic.
     - Endemic.
     - Infective.
  2. Locomotor ataxia.
  3. Poliomyelitis anterior.
  4. Spinal muscular atrophies.
  5. Hereditary ataxia (Friedreich).
  6. Chorea molle.
  7. Chronic ergotism.
  8. Diabetes mellitus.
  9. Traumatism.

- Abolition and Exaggeration
  1. Meningitis
     - Spinal.
     - Cerebral.
  2. Dementia Paretica..
  3. Idiocy.

Neurasthenia in Young Women.—Dr. W. W. Johnson (*American Journal of Obstetrics*) said there was such a disease as neurasthenia, though some deny its existence. As to its etiology it was a disease of civilization, occurring in city life, especially among those who lived luxurious lives. In such people there was a tendency to deterioration, with impaired nutrition and loss of nerve force. The children of such persons had a tendency to serious disease. They had no power of resistance. Young women who were over-taxed in their work or pleasure were especially subject to the disease.

The symptoms were numerous and presented many phases. There was loss of nerve tone. All the functions were below par. Early waking, as mentioned by Dr. Adams, was a curious circumstance. Food was not assimilated, and there was a condition of mucous catarrh of the colon; and the passage of mucus from the bowels was a symptom of nuerasthenia. There was a condition of nervous fright; in crossing the street there was sometimes great apprehension from passing vehicles, and terror in the presence of a crowd. There were anæmia, catarrh and constipation, all associated together.

It would not do in all cases of women who complained of loss of tone to call it neurasthenia. Each case should be carefully examined and all the organs inquired into. In all cases of neurasthenia the urine should be frequently examined. There should be no difficulty in differentiating between hysteria and neurasthenia, as the symptoms of the former were characteristic. Neurasthenia might, however, cause hysterical manifestations, and hysteria might develop as neurasthenia. As to treatment, he believed the best results would be obtained by rest and diet.

These patients should be kept in a passive condition, lying down much while in-doors, and should drive in an easy-going carriage, if allowed to go out during the day. Some patients were much benefited by total seclusion and cutting off all outside influences, as of papers, letters and friends, and perseverance in absolute rest. Travel was most injurious, and was especially exhausting when undertaken with a view of sight-seeing, as that increased mental strain as well as bodily fatigue. Change of climate did good, and it should be obtained in the least fatiguing manner. Mountain climate was the most beneficial and that of the Adirondacks was preferable. Massage did much

good and afforded all the exercise necessary. Drugs did no good. No one could say that arsenic or iron did any good. Other means without them did all the good.

Diet was of greatest importance. The patient should be over-fed, according to the recommendation of Weir Mitchell. Stimulate digestion by giving food with aids to digestion. They should eat plenty of meat—beef three times a day—but vegetables should be limited to one at a time.

Paralysis Agitans Without Tremor.—At a recent meeting of the New York Neurological Society, Dr. Frederick Peterson presented a wheelwright, sixty years old, who displayed characteristic mask-like rigidity of the face, with the attitude of paralysis agitans, the stooping shoulders, bent back, crooked elbows and knees. The hand and fingers were held in the characteristic position, but there was no tremor anywhere in extremities or head. The voice had the monotony and something of the festination of the speech of paralysis agitans. There was at times a sort of propulsion in walking.—*Medical News.*

NEUROTHERAPY.

Maximum Doses for Adults According to the New Italian Pharmacopœia of Medicines, with which neurologists are especially familiar:

MEDICAMENT.	SINGLE.		DAILY.	
	Grms.=	Grains or Minims.	Grms.=	Grains or Minims.
Acid, arsenious	0.005	$\frac{1}{12}$	0.015	$\frac{1}{4}$
Apomorphine hydrochlorate	0.01	$\frac{1}{6}$	0.5	$\frac{3}{4}$
Atropine, sulphate	0.001	$\frac{1}{60}$	0.003	$\frac{1}{20}$
Belladonna (leaves and root)	0.15	$2\frac{1}{4}$	0.4	6
Cantharides	0.05	$\frac{3}{4}$	0.15	$2\frac{1}{4}$
Chloral hydrate	2.0	30	6.0	90
Cocaine hydroochlorate	*0.2	3	*1.0	15
Codeine	0.1	$1\frac{1}{2}$	0.3	$4\frac{1}{2}$
Digitalis powder	0.2	3	1.0	15
for infusion	0.4	6	2.0	30
Extract, aconite root, hydro-alcoholic	0.03	$\frac{1}{2}$	0.12	2
" belladonna, hydro-alcoholic	0.03	$\frac{1}{2}$	0.1	$1\frac{1}{2}$

MEDICAMENT.	SINGLE. Grms.	SINGLE. Grains or Minims.	DAILY. Grms.	DAILY. Grains or Minims.
Extract, conium	0.05	¾	0.2	3
" colocynth	0.05	¾	0.2	3
" digitalis, hydro-alcoholic	0.1	1½	0.3	4½
" hyoscyamus, hydro-alcoholic	0.2	3	0.6	9
" lettuce	0 5	7½	1.5	23
" nux vomica, alcoholic	0.05	¾	0.2	3
" opium (17 per cent. morphine)	0.1	1½	0.3	4½
Gold and sodium chloride	0.05	¾	0.2	3
Hyoscyamus leaves	0.4	6	1.2	18
Iodine	0.03	½	0.12	2
Iodoform	†0.4	6	†2.0	30
Iron arseniate	0.01	⅙	0.05	¾
Lead acetate	0.05	¾	0.25	3¾
Mercury bi-chloride	0.02	⅓	0.1	1½
" bin-iodide	0.02	⅓	0.1	1½
" proto-iodide	0.05	¾	0.2	3
Morphine hydrochlorate	0.02	⅓	0.1	1½
Nux vomica	0.1	1½	0.3	4½
Opium	0.1	1½	0.5	7½
Pilocarpine hydrochlorate	0.02	⅓	0.06	1
Santonin	0.1	1½	0.3	4½
Silver nitrate	0.03	½	0.15	2¼
Sodium arseniate	0.006	1/10	0.02	⅓
Solution, mercury bi-chloride, hydro-alcoholic, 1 in 1,000 (Van Swieten's solution)	20.0	300	100.0	1500
Solution, potassium arsenite (Fowler's)	0.5	8	1.5	24
Strychnine nitrate	0.005	1/12	0.015	¼
Tincture, aconite, 1 in 10	0.5	8	1.5	24
" digitalis, 1 in 10	1.5	24	5.0	80
" nux vomica, 1 in 10	1.0	16	3.0	48
" opium, 1 in 10	1.0	16	5.0	80
" strophanthus, 1 in 20	1.0	16	3.0	48*
Water, bitter almond, distilled (1/10 per cent. H C N)	3.0	45	9.0	140
Wine, opium, 1 in 10 (Sydenham's laudanum)	1.0	16	5.0	80

[Most of these doses appear exceedingly large and some of them quite unsafe when previous and gradual tolerance has not been established. Nevertheless this list might be of value in medico-legal cases as authoritative.—EDITOR.]

* This dose appears to be too large. In *Merck's Bulletin*, Vol. II., page 47, the maximum single dose is stated as being 0.15 gramme (1¼ grains); the maximum daily dose, 0.5 gramme (7½ grains).

† The German Pharmacopœia gives 0.2 gramme (3 grains) as the maximum single dose and 1 gramme (15 grains) as the maximum daily dose.

Charcot on the Psychic Treatment of Neurasthenia.—One of the last contributions of this distinguished neurological *savant* to the profession he so gloriously adorned was the following, to *La Fratique des Maladies du Système Nerveaux dans las hôpitaux de Paris, par M. Paul Lefert:*

"If well directed, a very important part can be played in the cure of neurasthenia. In a case of psycho-neurosis, where the determining cause is of a moral character, it would be well to conceal that cause, and the first step the physician should take would be to win the confidence of his patient in the beginning, making him feel that his case is curable, never forgetting the expression of the poet: 'The best inspirer of hope is the best physician.'

"In neurasthenia, perhaps more than in any other disease, owing to the obstinacy of the nerves, and the slowness of the cure, the confidence of the patient in his physician, and the confidence of the physician himself in the curing of his patient, are the first and most important conditions to fill.

"The physician should, from the first, endeavor to restore the courage of his patient, not treating his disease as imaginary, but by moral persuasion, to bring him into a permanent state of mind where he hopes for a cure sooner or later. For example, if he believes himself attacked with gastric functional troubles, remove that idea of dilation of the stomach, which can become so fixed in his mind by the permanence and aggravation of bad digestion; for by analogy with certain psychic paralyses, the longer the idea of having this dilatation of the stomach, the more susceptible it would become of increasing, by a continual auto-suggestion, gastric asthenia.

"A second point, where the physician should concentrate all his efforts, would be to substitute in the mind of his patient, as far as possible, different ideas and thoughts, far removed from those having the determining cause of his trouble, advising various distractions, intellectual, etc., which course often proves more energetic than would be thought in the psychic treatment of neurasthenia."

Antikamnia.—"The importance attached to this drug, I think, is due to its anodyne and analgesic power, and the celerity with which it acts. As an antipyretic in

fevers, it acts more slowly than antipyrine, but it is not attended with depression of the cardiac system and cyanosis. Whenever a sedative and an analgesic together is indicated, this remedy meets the demand. In severe headaches it is the remedy *par excellence*."—Julian, in the *North Carolina Medical Journal.*

Bromidia as a Hypnotic and Sedative.—Dr. Angelo de Bellomi, of Italy, uses bromidia with excellent results in delirium tremens accompanied by insomnia, also in the delirium of typhoid, and in bronchitis with neurasthenia following influenza.

EDITORIAL.

[*All Unsigned Editorials are written by the Editor.*]

Craig Colony for Epileptics.—The Legislature of New York State has passed and the Governor signed the bill establishing a Colony for Epileptics in that State. The colony is named after the late Oscar Craig, President for some years of the State Board of Charities. The bill provides for the purchase of a tract of 1,875 acres of beautiful land in the Genesee Valley, near Mount Morris, in Livingston County. It has been a colony of the Shakers for twenty or thirty years, and is, therefore, perfectly adapted to its new use.

The law requires that all of the buildings put up should be on the village plan. A board of five managers is provided for, and these have already been appointed. Governor Flower, in order to make the new charity as ideal as possible, decided to select a specialist on nervous and mental diseases as one of the managers, so as to insure the best scientific treatment of patients and to keep the resident medical men in touch with all the latest developments in the pathology and treatment of epilepsy. He also appointed a lady residing within a few miles of the colony as one of the managers, in order that the women and children and general housekeeping can be kept under constant surveillance. In addition, a lawyer, a homeopathic physician and an editor were added to the Board. The managers serve without salary and meet at the colony once or oftener monthly. Having these ends in view, the Governor appointed as the Board of Managers: Dr. Frederick Peterson, of New York; Mrs. C. F. Wadsworth, of Geneseo; Geo. M. Shull, of Mount Morris; Dr. Chas. E. Jones, of Albany, and W. H. Cuddeback, of Buffalo.

An important provision in the bill is that the managers may accept any bequests of persons interested in the welfare of epileptics, and it is believed that many charitable wealthy people will build cottages upon the splendid sites on the tract, to bear their names and exist as lasting memorials to their desire to serve humanity in this wise.

A medical superintendent, steward, matron, pathologist, nurses, school-teachers, teachers of various industries and arts, and so on, are to be appointed as needed; but the colony will not be ready probably to receive patients before the autumn of 1895.

It is thought that the colony will ultimately number fifteen hundred to two thousand members. As soon as possible the six hundred epileptics in the county almshouses will be taken in charge. Later, private patients will be received at prices corresponding to the accommodations asked for. It is sure to become self-supporting in the course of time, and to grow into an industrial and agricultural village that will more than rival the similar and famous Colony at Bielefeld, Germany, upon which this is, to a certain extent, modeled.

At their organization in Albany, on the 3d of May, the Board of Managers made Dr. Frederick Peterson, of New York, President, and Geo. M. Shull, of Mount Morris, N. Y., Secretary of the Board.

This is a good move in the right direction. It should be supplemented with a legal provision for castration of the males and spaying of all the females, when the epileptic is chronic and intractable, that the tribe of these degenerate State wards may not be increased under the fostering care of the commonwealth.

Code Changes.—In view of the usual old code wrangle which seemed impending and the manifest disposition of certain members who seemed spoiling for a fight so soon as the majority and minority reports were read, we think the American Medical Asscciation acted wisely in promptly tabling the whole subject of code amendment agitation.

The usual annual wrangling and dissensions on this subject are discreditable to the profession, and exceedingly damaging to professional interests before the public. This whole subject had better be annually postponed until such time as the members of the Association shall be prepared with one accord, and in true fraternal spirit seeking the best interests and highest welfare of the profession, to reason together on the subject in that true spirit of confraternal deliberation which unselfish considerations for the general welfare may inspire. Meanwhile men will go on applying and interpreting the code according to their several interests and consciences, until a common desire

for its re-adjustment shall animate the inquiry, What changes does the practice of modern medicine demand, if any, in the better aspects of the code of ancient rules of professional conduct to adapt it to the demands of our time?

One thing is quite evident, and that is that whatever changes shall be made will be made with prudent caution and with consideration. The majority report attempted too sweeping a change in this code of our venerable fathers. It staggered the supremely conservative element in the convention like the tocsin of revolution. It looked like too much of a clean sweep. One or two propositions at a time might be received better.

The American Medical Association is cautious and conservative in all that concerns "questions of the code."

An Epileptic Colony for Illinois.—At the meeting of the Illinois State Medical Society, held at Decatur, May 15–17, a resolution was introduced by Dr. J. B. Maxwell, and unanimously passed by that body, indorsing a proposition for an epileptic colony on the Bielefeld plan. The matter was referred to the Legislative Committee, and that committee (consisting of D. W. Graham, of Chicago; J. B. Maxwell, of Mt. Carmel; and B. M. Griffith, of Springfield) was instructed to bring the matter before the next Legislature, and use all honorable means to have such a colony established.—*Medical News.*

A Section of Medical Journalism.—At the late International Congress at Rome, Dr. Dobrzycki, of Warsaw, read a paper proposing that at future congresses a section of medical journalism be established, in which the needs and duties of this important profession might be discussed, and in which the representatives of the medical press throughout the world might obtain all necessary information. The need of such a section was never more apparent than at Rome, where the facilities for gathering news of interest to the medical profession were so exceptionally meager.

Though our association takes the place of such a section, I submit to you for consideration, whether the interests of the medical press might better be promoted in a section of the association, though I think we are well enough as we are.

Loss of Distance Sense and Lesion of the Cuneus.—At a stated meeting held Tuesday, June 5th, 1894, at the New York Academy of Medicine, Dr. Robt. Safford Newton presented a case where marked failure to appreciate distances was manifested during life, the autopsy showing physiological partial destruction of the cuneus.

Commencement Exercises of the Training School for Attendants, at the State Hospital, at Danville, Penn., took place Thursday, July 12th, at 7:30 P. M. Class of '94 numbers 15.

American Medical Publishers' Association.—In consequence of the closing of the hotel at White Sulphur Springs, W. Va., the meeting-place of this Association has been changed to Hot Springs, Virginia, which is but a few miles east of the place first selected, on the Chesapeake & Ohio R'y. The date has also been changed to Monday and Tuesday, August 13th and 14th. All medical publishers are cordially invited to attend, as matters of vital interest are to be discussed. Several interesting papers have been announced, and the meeting promises to be one that no publisher can afford to miss. All who contemplate attending this meeting will please advise the Secretary, Charles Wood Fassett, St. Joseph, Mo., at once, stating the number of persons in the party, in order that provision may be made for their accommodation.

The Archives de Physiologie comes to our table clad in the habiliments of mourning for its distinguished *Redacteur en Chef*, the distinguished and incomparable *savant* M. E. E. Brown-Séquard, whose obituary appeared in our last number, and in whose worthy memory the scientific world will long carry in its heart thankful remembrance of his work and saddened memories, because of his demise. Another memorial from the pen of one of the eminent collaborators of the ALIENIST AND NEUROLOGIST appears in our present issue.

The St. Louis Clinique.—This publication has passed into the hands of Dr. Emory Lanphear, Professor of Surgery in the College of Physicians and Surgeons. Dr. Lanphear will conduct the journal in the interests of that school, and of the medical profession of the West.

British Medical Association.—The next annual meeting of the British Medical Association will be held at Bristol, on July 31st and three following days. Section on Psychology will meet in lecture room No. 4, University College. President, G. Fielding Blandford, M. D.; Vice-Presidents, S. Rees Philipps, M. D., and Fletcher Beach, M. D.

On August 1st the President will open the work of the Section by giving an address upon the "Prevention of Insanity," and a discussion is specially invited upon this subject.

On August 2nd it is proposed to hold a discussion upon "The Law in Relation to the Criminal Responsibility of the Insane;" Dr. L. A. Weatherly has promised to open it, and members of the legal profession will be invited to join (as visitors) in the debate.

The following additional discussions and papers have already been promised:

Discussions.—"The Treatment of Neurasthenia," G. H. Savage, M. D.; "The Status of Assistant Medical Officers in Lunatic Asylums," C. Mercier, M. D.; "Points Connected with the Education of Feeble Minded Children," G. E. Shuttleworth, M. D.

Papers.—Henry Blake, M. D. Lond. (Great Yarmouth), "Four Cases Illustrating the Origin and Possible Prevention of Different Types of Insanity;" F. St. J. Bullen, M. R. C. S., "The Influence of Reflex and Toxic Agencies in Insanity and Epilepsy;" Norman Kerr, M. D., "Probationary Curative Restraint of the Alleged Insane;" James Shaw, M. D. (Liverpool), "The Early Treatment of Mental Cases in Private Practice;" Telford Smith, M. A., M. D., "Cases of Sporadic Cretinism Treated by Thyroid Extract;" R. S. Stewart, M. D., "The Spastic and Tabetic Types of General Paralysis."

Members attending the Section will be invited to the Bristol City and County Asylum at Fishponds, near Bristol. C. Spencer Cobbold, M. D., Bailbrook House Asylum, Bath, and R. S. Stewart, M. D., Glamorgan County Asylum, Bridgend, Hon. Secs.

The Conservative Surgery of the Female Pelvic Organs.—Dr. William M. Polk, of New York, opened the discussion at a session held under the direction of the American Gynecological Society. His remarks were based on a hundred and sixty-four cases of abdominal section for disease of the appendages. Of these sixty-four had been subjected to the radical operation, and one hundred to the so-called conservative process.

Among the three prominent operations on the uterus—viz., myomectomy, ligation of the arteries for fibroma, and curettage and packing—the first might be said to be particularly appropriate in all cases of pedunculated fibroids, fibro-cystic or myomatous growths; ligation of one or more of the feeders of the uterus instead of oöphorectomy; and curettage and gauze-packing in all forms of endometritis. To avoid the occurrence of premature atrophy of the genital organs in young women, and to retain the function of ovulation, he had practiced, and with success, resection of the diseased ovaries.

In conclusion, he referred briefly to a number of his cases in which pregnancy had followed such conservative operations, and, more important than all, where the mental, moral, and physical well-being of the patients had been preserved.

Dr. William Goodell, of Philadelphia, being too ill to continue the discussion, his paper was read by the secretary of the Congress, Dr. William H. Carmalt. In this paper the writer stated that he considered that the whole question of the proper treatment of these disorders hinged on the effects of castration on women. These effects were prolonged, and distressing vasomotor disturbances, a tendency to low spirits, suicidal impulses, and even insanity resulted. Again, castrated women were liable to become unsexed to such an extent as to lose all sexual feeling or to have it greatly blunted. In some, senile atrophy of the genitalia took place, or in its place there was a hyperæsthetic condition of the vulva which forbade coition and created much domestic unhappiness. An unavoidable and disagreeable result from castration was sterility, which in itself was often a curse. The writer laid stress on the prevalent lay opinion that women deprived of their ovaries were thereby wholly unsexed. Castration in the male or in the female was alike regarded as a sexual mutilation to which a stigma was attached. No woman would marry a eunuch, and few men would wed a woman without ovaries. It was manifest, he said, that during the period of a woman's menstrual life her mental, physical and social welfare depended largely upon the continuance of the catamenial and reproductive functions; hence, the conservation of those organs which presided over these functions was of the utmost importance.

The writer went on to deprecate hasty operative

interference. According to his experience, few women perish from chronic disease of the pelvic organs; many more die from radical operative measures. Cases were cited in which great disorganization of the tubes and ovaries had not prevented conception, and also where pregnancy had occurred even when only a small fragment of the ovary or a short stump of tube had been left after the operation. The writer contended that the glory of modern surgery was conservation, yet the glamour of antiseptic surgery had so dazzled the modern gynecologist as to make him a spoiler rather than a conservator.

Dr. Luteaud, being asked to take part in the discussion, said that he had never seen Dr. Polk's method of curettage and packing cure a case of pyosalpinx, but he had seen pregnancy follow this conservative treatment. He was decidedly of the opinion that a woman under forty years of age enjoyed much better health when the function of menstruation and ovulation had not been interfered with.

Dr. Matthew D. Mann, of Buffalo, expressed his pleasure at having heard this discussion, for he believed it would have the effect of removing the stigma from the gynecology of the present day—that there was too strong a tendency to do mutilating operations. He had practiced Dr. Polk's methods, and had had his patients express their gratification at this conservative effort.

Dr. Joseph Taber Johnson, of Washington, said that in one sense all were conservative. He thought the radicals would not accept the statement that they believed in the total destruction of woman's genital organs and the crowning glory of womanhood—motherhood. He did not know of any operator who cut out the ovaries for the cure of a salpingitis, or removed the tubes for a slight inflammation and where the tube was still open. Most of the patients operated on had already been made sterile by the disease. He was afraid that the discussion would have the effect of deterring many from submitting to operation who really needed such treatment.

Dr. Howard A. Kelly, of Baltimore, said that we were unfortunately at a stage when we were obliged to speak of these matters in a sweeping way, instead of referring to special forms of pelvic disease. This discussion had begun ten or eleven years ago, when the question had arisen as to the propriety of removing both

ovaries when only one appeared to be diseased. It had not long ago been the practice to remove an ovary containing a small cyst, yet now it was his practice to rupture even quite large cysts without extirpating the ovary.

Dr. Florian Krug, of New York, said that he belonged both to the radical camp and to the conservative camp. He was in accord with most of Dr. Polk's statements.

Neurologists will be delighted to discover in the "Proceedings" of the recent Congress of American Physicians and Surgeons, new evidences of advancing conservatism among gynecologists in regard to operations on the uterine appendages, in the line of neurological and psychological bias and physiological opinion.

Apropos of the above we quote from a gynecological authority, Goodell:

> In the treatment of the diseases of women, at the present time, there seems to me to be a tendency to lay too much stress upon lesions of the reproductive organs. Too little heed is, therefore, given to the nerve element of woman's diseases, and as a natural sequence the surgical feelers and *antennæ* of the medical profession, always too keenly sensitive, vibrate vehemently at the approach of an ailing woman. This trend of the profession to appeal to the knife as the great panacea for woman's diseases, is seen everywhere. It prevails alike in city, town, village and hamlet. It asserts itself in every medical discussion and stands out in bold relief upon the pages of every medical journal. It has caused many needless sexual mutilations and unnecessary operations, and it is, in my opinion, the great medical error of the day.

Woman in Medicine.—Woman's equality or inequality of intellect, compared with that of man, is not the question to be considered. The question is rather one of fitness. Woman has intellect enough and courage enough, as shown in her history, to fittingly fill and adorn more places in the world's work than she now occupies. Her sentiment, her sympathy, her delicacy and tact, are superior to man's. Her attributes of mind are not always comparable to his because they are different.

If intellectual power over that of woman were an absolute essential to one engaging in the practice of medicine there would be but few masculine physicians.

As to the propriety of woman attempting all departments of medicine, there may be a question, but as to her capacity if she should will it, I think there is no

question. Many are the arts in which women excel requiring skill of the highest order, and it would be as logical to say man is not as capable as woman because he is not her equal in the arts in which she is especially skilled as to pronounce her unfit for a vocation in which she has not yet been thoroughly tried. Woman's sense of duty and love towards her offspring, her physical and periodical physiological disabilities have kept her out of the dangerous paths of war, and the demands of the chase and hunt, but not her lack of bravery or capacity for acquiring skill.

As mankind has emerged from the savage state, man's consideration for woman's physical embarrassments, her willingness and preference to prepare food for both while he went in pursuit of it, and the growing demand on man, have compelled him to recognize her as his helpmate, and to have consideration for her superior fitness for certain duties necessary to the common weal of both.

Woman's physical embarrassment and inferiority in contests of strength accounts for her appearance of subordination to man in the savage state. If her "big injun" husband refused to carry the papoose, her instinctive love of her offspring compels her to submit, and her instinctive mother love compels her to nourish it; but the ingenious devices employed by woman from the savage state to that of our highest civilization, to wrest from man, her physical lord and master, co-equal comforts for herself and offspring, prove anything but intellectual inferiority. Physically at the mercy of man's superior strength, and handicapped by physiological embarrassments from which Nature has exempted man, she, nevertheless, has secured and maintained her social equality with man, and even secured his acquiescence in her supremacy in certain directions, by tact and moral suasion, which come of her mental endowments. What force is there in the argument that because the area of woman's cerebrum is a little smaller than man's, which grows out of the manner in which occupations are divided, that woman is therefore not entitled to equal rights with man to choose her occupation. Some investigators have maintained that woman's cerebrum is larger in proportion to her frame than man's is to his frame, and that the cerebellum of woman is not only relatively, but actually, larger than the cerebrum. Even Sir James

Crichton Brown, who claims from his investigations that the brains of women are relatively smaller than those of man and essentially different in structure, has shown that the vertebral arteries are larger in women than they are in men in proportion to the carotids, and we may concede the claim of Debiere, that her brain is four per cent. smaller than that of man considering relative height and weight. Yet the cerebellum, in which she excels, makes character, and character makes the man or woman. The dominating, and even trophic, influence of the cerebellum over the neuro-muscular system, has been lately shown by Luciani (ALIENIST AND NEUROLOGIST, No. 13, page 454, 1891, *et seq.*); and he has revived the doctrine of the great Turin anatomist, Luigi Rolando, who, recognizing a certain analogy between the voltaic pile and the lamellated structure of the cerebellum, considered it as "the motor of the animal machine." And in this connection it will be remembered that Fluorens, who succeeded Rolando in securing the attention of the physiological world, regarded it as the regulator of the more complex movements; and Majendie considered it as an organ of equilibration—I suppose that accounts for the power of woman to keep her male companion in the straight path so much better than he does for himself, why she is a balance wheel to so many of us, and why we yield so gracefully to her sway.

Woman has her peculiarities, mental, moral and physical, and we men are thankful for her peculiarities; and while some of her peculiarities make comparisons odious and impossible, they are not marks of inferiority. She is not therefore inferior. Some of her qualities are possibly superior to those of man.

The manner in which through the centuries the faculties of woman and man have been exercised the differentiation of duties and the specialization of occupations have made difference of skill markedly apparent and comparisons impossible. The duties of the office and the household are both difficult and intricate each to the other sex, and cannot well be compared. The culinary art and the counting-house have both their mysteries and respective excellencies growing out of skilled management. Woman plays her part well wherever she has chosen to be cast, whether on the stage of the theater, or in the drama of life.

If we appeal to the battlefields of life we will find

among its heroes the Bradiceas, the Joan d'Arcs, and Charlotte Cordays; among its statesmen the Madame de Staels and Maintenons; among its philanthropists the Florence Nightingales and Dorothea Dixes; among its physicians the Mary Jacobis, among *accoucheurs* the greatest authority of her day in France.

But why attempt to enumerate the heroines of the sex noted in historic page, whose number, far out of all proportion to their public opportunity for fame and great duty, is transcended by a multitude which no man can number, of the silent heroines of the home, where only living is life, and the soul in this world is happy where the characters of the good and the great and the brains of statesmen, scientists, poets and heroes are builded and formed for the weal of the world under her plastic, gentle hand and skillful ministrations—she, whose heart has never wearied and whose hand has never palsied so long as the brain has held its physiological sway, in well-doing works of good for man. While man has striven for fame and glory under the stimulus of ambition, woman has been content in the silent sanctity of home, to train man and woman for great and noble deeds, to mold his character by the persuasive methods and enduring, developing influences of the nursery and the later influences of the home, where men's characters are made by means often forgotten in after life, and minds are molded in models that afterwards mark great epochs in the history of mankind. Truly, it was no false promise without fruition that she was made as a helpmate for man.

There is an organic and physiological weakness in woman that makes successful single-handed physical combat with man often a physical impossibility. But this weakness is her greatest moral strength with man. It has led one of the noblest of our kind to say: "He that should lay hand upon a woman save in kindness is a wretch whom it were base flattery to call a coward." That other poet, more rhythmical than generous, who sarcastically sang of woman:

> In our hours of ease,
> Uncertain, coy and hard to please,
> And variable as the shade,
> By the light quivering aspen made,

knew nothing of the real nature of the sex. If he had, he could not have made this ungenerous fling, whose

justification, if any, could only be found in examples of the hysterical diathesis or in the psychopathically unstable. But even this poet is compelled to say of woman,

> When pain and anguish wring the brow,
> A ministering angel thou.

He believed in women doctors, probably of the heart's-ease and mind-healing kind.

Any natural history argument that might be adduced to prove woman's unfitness for equality with man in most of the avocations of life, is overthrown by the one all-sufficient reference to the queen ant and the dominion she exerts over, and the homage she receives from her tribe, as well as her usefulness and fecundity. Nature has made her the life of the emmet species. A similar argument might be drawn from the life and characteristic of the queen bee.

The sex is fully able to take care of themselves in any contest but a fist fight; and the history of the amazons reminds us that even in battle woman's prowess is not to be despised. There is really no good anatomical reason why women should not make athletes as well as men, under proper physical training. What she may lack in shoulder she makes up in pelvic base. She would be developed into an athlete or gymnast of a different kind perhaps, but something just as good, just as she is developing mentally, *pari passu*, with her mate. Woman was intended to be a match, and help, and mate for man. To go neither in front, nor behind him, but by his side. She is fast learning the way out of her subordination, and with this knowledge fully acquired, she will secure her right to every means of maintenance she is capable of employing, and to every position she may competently and properly fill. She is as well fitted, under proper training, to prescribe for, as she is to treat the sick, especially in all the ills peculiar to her sex and her offspring, and she will constantly, in the coming years, checkmate man in every attempt to deny her this privilege, but whether she will choose to exercise it alone or in its entirety is another question. We think not.

Woman likes to have men by her in many of her undertakings. She was not satisfied to eat the apple in the garden all alone, but when she thought she had found something good she called Adam to share it with her;

and, though she got him into trouble, he stood by her, put on all the clothes he could find, shared her shame and misfortune, went out of the garden with her and became her consultant ever after, just as he will continue to do when women get numerously into the profession. They will do most of the practice and we will stand by them in the day of their trouble and be their faithful, loving consultants. There is no use in opposing this movement. The women have a right to be doctors, and they have the ability, if they choose to exercise it in this direction. They possess the diplomacy, if not the physical power, to carry their point, and they will carry it wherever and whenever they may choose to exercise it.

National Bureau of Public Health.—The New York Academy of Medicine, in a recent circular letter to the profession, aiming to stamp out certain contagious diseases, says:

In the light of modern medical discoveries, our people ought not to go on dying by tens of thousands each year from tuberculosis, typhoid fever and diphtheria, for they are all preventable diseases.

Co-operation by the National Government with State and local health authorities throughout the country would secure uniformity of action and concentration of effort, and many lives would be saved yearly, and the day would begin to dawn when these pests will be stamped out.

The medical profession of the country is practically a unit in favor of the bill now before both Houses of Congress, to establish a Bureau of Public Health within the Department of the Interior. Under these circumstances the Committee of the New York Academy of Medicine ventures to hope that you will join it in this good work, and through the editorial columns of your influential paper aid in this campaign of education.

This is all true. The profession endorses it, and the government should act accordingly. The nation should act also in regard to its postal service and mail coaches. Palace, sleeping cars and day coaches, street cars, ships and steamers need governmental sanitary inspection and regulation in the interest of public health. Likewise the hotels, restaurants and all abodes of men.

Dr. Mitchell on Insane Asylum Management.—The *New York Medical Record* thus comments: "The address of Dr. S. Weir Mitchell before the American

Medico-Psychological Association, at their meeting held in May last, which has just been published (*Journal of Nervous and Mental Diseases*), and it promises, we believe, to excite wide attention. Dr. Mitchell, with the consent of the Association, took the opportunity to arraign, in the severest manner, the present methods of caring for and treating the insane in America. He undertook the task evidently with reluctance, but with a keen sense of the duty before him and of the opportunity offered by the very generous attitude of the asylum superintendents. The speaker fortified himself well for his work, not only by a personal knowledge, but by letters sent to him from nearly thirty of the leading neurologists and alienists of this country, giving opinions and suggestions regarding the present methods of managing asylums.

"It is unnecessary to say that Dr. Mitchell's address is throughout an interesting and scholarly one, full of wit and satire, yet withal not unkindly or in any way unjust or offensive. And, after all, it is the Boards of Managers, the public, and the politicians which receive the severest castigation. We wish we had space to quote the criticism upon managing boards, their make-up and their methods. There are, of course, good as well as bad managers, but it is true that in the majority of cases the modern asylum trustee has not the slightest conception of the higher and truer needs of a hospital for the insane. The prevailing idea is to look after the farm, the kitchen and laundry, and to get material for a satisfying annual report with forty per cent. of "cures" and a balance to the credit of the institution.

"As for the medical superintendents: their weakness, he says, lies in this, that they work apart from their fellows and are not in touch with the medical profession as a whole; that they aim only to run smoothly a great hotel or boarding-house, knowing little and contributing nothing to psychology or psychiatry, and least of all to therapeutics. Dr. Mitchell's final words furnish us a picture of the ideal hospital for the insane. We read it with delight at the skill of the writer, as he portrays what to his fancy the present should, and the future may, furnish us. But we feel also a sense of sadness at the difference between the ideal and the real. And we think of our own State Lunacy Commission laboriously aiming to cut down the price of brooms, and utterly forgetful of the higher needs of hospitals for the insane.

"We trust that Dr. Mitchell's address will awaken not only the conscience of those now responsible for asylum management, but will stir the public heart until the politics, penuriousness and incapacity that surround so much of American asylum work are abolished."

Referring to the above, we think Weir Mitchell is a little off in his estimate of the leading American Asylum Medical Superintendents. At the same time it may be conceded that his arraignment of the peculiar parsimonious policy of certain States and counties in their care (?) and treatment of the insane, contains much of truth. The county alms-house insane annexes, the asylums for *care mainly*, without every possible curative provision that promises to save the unfortunate insane and the State from the distress and evil of chronic insanity, should be abolished and substituted by hospitals.

But Dr. Mitchell has certainly not duly estimated the work of the medical profession in these institutions and in ameliorating the condition of the insane of the United States. American psychiatry, as practiced and clinically learned in these very institutions, has given us our Rays and Earles and Tylers, Benjamin Rush and Amariah Brigham, the two latter having been pioneer American alienists of no mean ability in neurology in the very infancy of neuriatry and psychiatry in this country, and quite a number of the asylums of the United States are doing good necroscopic and clinical work, notwithstanding the fact that their medical superintendents have the lawful oversight (under the State statutes and hospital by-laws) over the subordinate officers (the steward, farmer, gardener, engineer, etc.) of their respective institutions. Dr. Weir Mitchell means well, but he is mistaken. The fault, where hospitals for the insane are not doing scientific work is not in the varied labors imposed upon the medical chief, so much as in the things he prefers to do, or prefers to omit doing.

The remedy is not so much in destroying the prerogatives of the superintendent as improving the general qualifications of physicians in charge.

The political government and frequent changes in asylum management and government for political causes, are, as Dr. Mitchell maintains, to be deplored, and the profession should never cease its efforts to remedy these evils. The coming doctor will be better educated than

the present, as the present is in advance of the past, and political parties will have better medical timber than now. This is our hope for the public insane.

American Hospitals for the Insane.—*The Medical Standard* stands up for the American Hospitals for the Insane against the sweeping and unjust charges of Dr. S. Weir Mitchell. *Vide* August number.

Chancellor Chaplin, of Washington University, tried at a recent alumni banquet to tell the assembled fellows of Harvard Medical School how little he knew about medical teaching in "the West," by which he certainly succeeded in enlightening his auditors about as successfully as the lamented Horace Greeley did the public in his famous dissertation on farming. What Horace knew about planting corn in the ear, etc., appears in the post-prandial speech of the distinguished Chancellor of Washington University to have been fully paralleled.

If Chancellor Chaplin would visit other. medical schools, and mingle with their faculties, he might have a better opinion of them and their teaching and motives than he expresses in the term "disgusting." A little more personal first-hand enlightenment might give him not only a far higher opinion of his teaching medical *confrères* in the West, but *possibly*, a little less exalted estimate of his *own* school, which, though good, is certainly not regarded by good judges, as the best West of the Alleghanies.

Doctor Chaplin's knowledge of the medical schools of the West, their faculty abilities and teaching facilities, recalls the old Latin examination saw, viz.:

Professor:—*Quid est crerare?* Candidate:—*Ex nihil facere.*

Professor:—*Ergo te doctorem faciamus.*

The Chancellor has drawn upon his imagination for his facts, and on his fancy free for his figures, if he figured at all on the subject. *Parturiunt montes, nascetur rediculus mus.* Look about you, Chancellor.

The Twenty-Second Annual Meeting of the American Public Health Association, of the United States of America, the Dominion of Canada and the Republic of Mexico, is to be held at Montreal, Canada, September 25, 26, 27, 28, proximo.

Damages for Invalidism from Shock.—The Supreme Court of Minnesota has ruled that where the evidence tends to show that prior to sustaining a personal injury a woman was healthy and active, but by such injury is rendered a helpless invalid, an award of $10,000 damages is not so large as to warrant a reviewing court in saying that they are excessive. In the case on trial the injury for which damages were awarded was in itself slight, but medical testimony supported the plaintiff's claim that the nervous shock resulted in cardiac and neurotic disease.

Such verdicts are righteous, and such damages are not excessive, where the change in health can be clearly shown to have resulted from the railway shock, as exciting cause, even though a presumption of neuropathic tendency pre-existing may be shown in the family history. An injury which brings out a latent tendency to disease, which might otherwise be dormant for life, should be paid for by the party responsible for the ill health it develops, and the mere fact that such conditions exist, when no railway injury is received should count nothing against the complaining victim, unless other and more probable exciting cause is shown.

This is our idea of what would be justice to such unfortunate real victims of railway shock. A life of spinal irritation and neurasthenia excited by a raillway collision should be compensated for, so far as raiway negligence is responsible, and money can pay, as much so as when limbs or lives are lost or other disease, follows. This would not be considered in other cases, that if the patient had lived longer his legs might have been broken any way, or he would have died of some disease to which he had a family inclination.

"Medicine and Modesty."—The *Medical Record*, which seldom finds much "good in Nazareth," West of the Alleghenies, criticising the claim of our esteemed contemporary, the *Cincinnati Lancet-Clinic*, which insists that the medical profession is just as big as any other calling, etc., etc., and wants a medical cabinet officer at Washington, thinks Dr. Culbertson is "putting it rather too strong" in saying the success of the army and navy is more dependent upon the resources of the medical department than ever before, "while the prosperity of the people is wholly determined by their condition of health."

Now, in a certain sense this is emphatically true. "Without health, peoples and individuals are nothing," and the more we "put it" to the people this way, if Dr. Shrady will allow the expression in a Western man, the more and the sooner medicine will be appreciated by its beneficiaries, who now give it little thanks, and no national recognition. If we but insist on acknowledgement of our true merits, and upon the high functions which public medicine fulfils, we will repeatedly and unitedly remind the country and its legislators, of the benefactions of medicine and the country's duty to its benefactor, till the high and just claims of medicine shall be substantially acknowledged in the high places of the land and among all of the people.

It is one of our country's needs just now to justly recognize its obligations to medicine as well as to some other things—labor among them.

The country should now have a medical officer in the cabinet and councils of the nation. Its army and navy, its transportation service by land and sea, especially its sleeping car service, its schools, academy and hospital systems, its factories, arsenals and military schools, need a health bureau and a medical officer in the cabinet. We gain less by cringing on bended knee, far less. Let us aim and ask for what the country owes to medicine as to its health and strength and happiness, and what the government owes to itself and the people as the conservator of the people's highest welfare.

American Electro-Therapeutic Association.—The fourth annual meeting of the American Electro-Therapeutic Association will be held in New York, September 25th, 26th and 27th, at the New York Academy of Medicine.

Lombroso *versus* Women.—In the January number of the ALIENIST AND NEUROLOGIST, for the present year, we reproduced without comment, a foreign essay from the pen of Signor Cesare Lombroso, the eminent Turin psychologist, wherein he attempted to show that the female mind is incapable of displaying marked mental superiority, of the magnitude of that of the male. She may manifest great talent, but never genius, except in extremely rare instances. Her field of successful intellectual endeavor has always consisted, and must ever consist, not in creating great ideas, but in appropriating, assimilating and perfecting those of her male superiors.

With what degree of reliance may the reader accept the statements and conclusions of a man who omits from his painstaking category of the names of women of distinguished mental superiority, that of Queen Elizabeth of England? What does Lombroso know about the mind of woman, when he fails to recognize the genius of Cleopatra? Did he ever see Taglioni or Elsler evolve the poetry of motion from a simple mass of organized force and matter, until thousands of entranced spectators burst forth into an ecstatic shout of rapture? Can he have ever realized the Bernhardt purr in a love scene or Rachel's towers of passion in a tragedy?

Lombroso's soul is desiccated. Where are his thoughts and emotions in apposition with the infinite grace and virility of Madame Roland and of the Duchesse de Chevreuse? Perhaps he classes the latter as mere politicians, which, according to his estimate, neither typify nor reflect genius. He might better frankly admit that the very *genius* of politics lies enshrined in woman's soul; that under her guidance it is equal to every new combination in social life, and is irresistible. The peasant, the soldier, the statesman, the *savant*, the priest and the financier, are its food and its playthings from the cradle to the grave. In this her empire woman is original and is never a copyist. If she does not plead and crawl like a man toward a logical conclusion, it is because her genius can solve the problem before he can state it. She began society as the slave of man, but has so planned its progress that men are now her slaves. Yet her conquered and tamed gorilla believes that she is intellectually his inferior and is still his menial. She has the tact and the genius to let him think so. WARREN WEBSTER.

Dr. Brown-Sequard.—The Paris journals contain an aftermath of interesting details of personal characteristics and of incidents in the life of the great physiologist recently deceased.

Brown-Séquard's issue from an American father and a French mother explained the curious *mélange* of facial traits which marked his somewhat singular and original physiognomy. From his mother he inherited certain distinctively French qualities of mind, accounting for his natural gaiety of disposition and his wonderful facility of extempore speech and impressive elocution. His physical appearance, on the other hand, was decidedly of the

Anglo-Saxon type. Those who knew him in his latter years will not forget his well-preserved and robust frame, his clear eye, his smiling and affable air, his florid complexion, and his visage surrounded by ample locks of silvery hair. From his father he probably inherited a taste for adventure and voyaging common to the English race, as well as that practical sense and tact which enabled him promptly to enrich the field of medicine with his manifold discoveries in physiology.

In the *rôle* of both physician and physiologist, there were few essential questions in the domain of each that he did not touch. He was, on this account, the despair of many a modern youth. The latter could hardly broach a supposed new discovery without hearing from the lips of the master the following discouraging remark:

"In 1840 or thereabouts, I prepared and read a memoir on that very subject." But the benevolent smile which ever accompanied such an observation provided a balm for the wounded *amour-propre.*

His professional enthusiasm and courage often bordered on temerity, and it is noteworthy, in view of the trying tests to which he sometimes subjected his organism, that his life was neither extinguished nor shortened thereby. His experiments with the separated head of an executed criminal, which, on the transfusion of fresh blood into its vessels, exactly counterfeited life, in the elasticity of its muscles and in the response of its pupils to a strong light, are still fresh in the professional memory. Yet few readers probably remember that the revivifying blood was let from the experimenter's own arteries.

When testing the juices engaged in stomach digestion, it was his wont to swallow a sponge attached to a string, and to withdraw it saturated with the gastric fluids.

A severe epidemic of cholera having attacked the inhabitants of Mauritius, he promptly repaired to his birthplace to do battle with the scourge, and to treat and solace his compatriots on that island. He stopped at no exposure or fatigue on that occasion, in order to free his medical assistants from fear or terror, and to infuse courage into the corps of nurses. He maintained that the fresh alvine discharges of the suffering and the dying were innocuous to the well, and submitted to quite unnecessary, if not hazardous, personal tests to assure all of the honesty of his conviction in that regard.

His first trials of the effects of subcutaneous injections of animal extracts were practiced upon his own person, at a period of life when the vital vigor was little adapted to such novel experimentation.

The deceased displayed to the last, his enormous capacity for intellectual labor, and despite his seventy-seven years, and the consequent inevitable decline of both health and strength, it is alleged that the last number of his *Journal of Physiology*, created by him in 1858, was almost wholly the work of his own editorial hand.

W. W.

The Bicetre Hospital for the Insane is not exempt from the serious scandals that afflict less noted institutions of its kind, if the following clipping from a Paris newspaper is worthy of credit:

The correctional tribunal of the Seine recently sentenced to ten months' imprisonment one of the attendants at Bicêtre, named Redureau, for having forgotten a feeble imbecile whom he had placed in a hot bath. This unfortunate patient, named Ralbotier, was found by one of the passing supervisors, to be literally cooked, during a half-hour that his attendant had spent conversing in a neighboring ward.

According to the testimony, the entire skin of the deceased separated from his body like a stocking.

If reflects severely upon the Bicêtre administration that its *personnel* of attendants should be recruited from such subjects as Redureau proved to be. His previous court record disclosed that he had been convicted five times of theft, that he had been a professional beggar, and had been guilty of an attempted homicidal attack upon the police.

W. W.

Infantile Alcoholism.—The *Journal of Hygiene*, a reputable scientific sheet published in Paris, is responsible for the following:

In Scotland, in order to appease the cries of infants, the latter are made to suck a thick fragment of cloth, saturated with whiskey; and more or less powerful doses of the same kind of liquor are administered after weaning, under the pretext of fortifying these little ones.

In various provinces of France, it has passed into a proverb that wine is necessary to diminish the pains and dangers of dentition. In the Department of Seine-Inferieure, the youngest infants are supplied with rations of brandy on all great holidays.

The idea generally prevails, among the lower classes in France, that the children must be early habituated to the use of wine. On fête days, in the suburbs of Paris, the stranger is shocked to see seated in front of

their parents, in the wine-shops that there abound, children of four, five, six, seven and ten years of age, each with a glass of undiluted wine in its hand. If the child refuses to drink it, the parents manifest their displeasure by reprimands or ear-cuffs. Under the terror thus inspired the poison is swallowed. If the little victim is afterwards ill and a physician is called, the father says without emotion to the latter: "That little fellow will not even drink a glass of pure wine; but he must accustom himself to it."

W. W.

The American Neurological Association.—The Twentieth Annual Meeting was assembled from May 29th to June 1st, inclusive, in Washington, D. C. The programme included the following:

"Report of a Case of Spinal Syphilis and one of Intracranial Syphilis, with Microscopical Specimens," by Dr. Landon Carter Gray; "Merycism," by Dr. W. A. Hammond; "Inebriety as a Disease, Analytically Studied," by Dr. R. M. Phelps; "A Case of Myxœdema Treated by Sheep's Thyroid," by Dr. Samuel Ayres; "The Genesis of Hallucination, Illusion and Delusion," by Dr. H. A. Tomlinson; "A Case of Pontine Embolism with Paralysis of Ocular and of Orbiculo Palpebral Movements on One Side, and of the Limbs on the Other, with Remarks on Focal Lesion in the Pons," by Drs. Chas. K. Mills and John Zimmer; "Thyroidectomy in a Case of Grave's Disease," by Dr. J. Arthur Booth; "On Crossed Knee-Jerk," by Drs. Guy Hinsdale and J. Madison Taylor; "Some Problems Relating to the Cerebral Fissures," by Dr. Burt G. Wilder; "The Insanity of Puberty and Adolescence," by Dr. H. R. Stedman; "Lumbar Puncture (Quincke) for the Withdrawal of Cerebro-Spinal Fluid" by Dr. Wm. Browning; "Gastro-Intestinal Neurasthenia, *i. e.*, Nervous Dyspepsia," by Dr. Leonard Weber; "Exhibition of a Neurological Percussion Hammer," by Dr. Wm. C. Krauss; "Cerebral Œdema," by Dr. George J. Preston; "The Non-operative Treatment of Metatarsalgia," by Dr. V. P. Gibney; "A Case of Exophthalmic Goitre, Cured by Thyroidectomy," by Dr. Frederick Peterson; "Cerebral Hemorrhage; Notes on its Cause and Premonitory Symptoms," by Dr. Charles L. Dana; "The Cortical Localization of the Cutaneous Sensations," by Dr. Charles L. Dana; "Exhibition of Sections from the Mid-brain, Pons, Medulla-Oblongata and Spinal Cord from a Case of Chronic Chorea," by Dr. James Hendrie Lloyd; "A Case of Amyotrophic Lateral Sclerosis in a Child," by Dr. Charles Henry Brown; "The Significance of the Exaggerated Knee-Jerk and Ankle Clonus and their Relation to Diagnosis," by Dr. G. M. Hammond; "A Case of Infantile Hemiplegia, Imbecility and Epilepsy—Craniotomy—Marked Improvement," by Dr. Edward B. Angell; "A Case of Congenital Hydrencephalocele," by Dr. Edward B. Angell; "Exhibition of a Suicide's Brain, with two Pistol Ball Wounds," by Dr. Burt G. Wilder; "Experimental Investigations on the Physical and Chemical

Action of the Galvanic Current upon the Living Organism," by Dr. G. W. Jacoby and Dr. F. Schwyzer; "Report of a Case of Diffuse Myelitis Following Spastic and Choreic Symptoms of Three Years' Duration, with Specimens," by Dr. F. X. Dercum; "Traumatism as a Cause of Locomotor Ataxia: A Critical Examination of the Evidence, Including a Report of Three Supposed Cases," by Dr. Morton Prince; "The Non-operative Treatment of Brain Tumors," by Dr. Theodore Diller; "Lesion of the Optic Thalamus; Death from Intestinal Hemorrhage," by Dr. Wharton Sinkler, of Philadelphia.

GRÆME M. HAMMOND, M. D., Secretary.

Wanted.—Medical Counsellors.—The development of antisepsis, the improved technique of the specialties, the growth of surgical skill and the multiplication of surgeons, has made fearful inroads upon the human anatomy afflicted with disease. That skilled judgment that stays the skilled hand chirurgical, has not kept pace with the enlarged ability to cut skillfully, among doctors. The crying need of the profession now is the doctor with the knowledge to determine the precise time and place to cut, as well as how to cut with care and safety. Let medico-surgical judgment be now cultivated, commensurate with American surgical operating skill, and American surgery will be without a peer in the world, but some of our younger surgeons seem to have the daring of the devil. I verily believe some of them would venture to curette the walls of the fourth ventricle and let the patient take his chances in getting along without this center of innervation, and the operation would be done beautifully, skillfully and with neatness and dispatch.

American Medical Association.—The Forty-fifth Annual Meeting of the American Medical Association was held at Odd Fellows' Building, San Francisco, June 5th to 8th inclusive.

The work of most of the sections was up to the usual standard.

The matter of revision of the Code was indefinitely postponed.

The dues of the Association were made the subscrip-price of the Journal, thus saving the Association several thousand dollars annually. The social features were numerous and varied, extending beyond the week of meeting. Officers were elected as follows: Donald Maclean, of Detroit, President; Vice-Presidents, in the order named,

Sterling Loving, Ohio; Wm. Watson, Iowa; W. B. Rodgers, Tenn.; Dr. F. S. Bascom, Utah; Treasurer, H. P. Newman, Ill.; Permanent Secretary, W. B. Atkinson, Penn.; Assistant Secretary, G. H. Rohé, M. D. Baltimore was selected as the next place of meeting.

A noteworthy entertainment was a banquet to the American Medical Editors' Association, given at the Palace Hotel, by R. E. Queen, of San Francisco, which was attended by about ninety doctors and their guests, many of them famous throughout the country.

Dr. C. H. Hughes, President of the Editors' Association, introduced the toastmaster, Dr. I. N. Love, Chairman of the Committee of Arrangements, who said the custom of holding these banquets was inaugurated in St. Louis, and expressed the wish that they be long perpetuated. Dr. Hughes responded to the first toast, that of "The Editors' Association," greeting the assemblage as he had the pleasure of doing last year in the Arlington Hotel at Washington, and entered upon a eulogistic tribute to the value of medical journals to the profession and to the outside world.

Other toasts were responded to as follows: "The American Medical Association," by ex-President Henry O. Marcy, in the absence of the President, Dr. James F. Hibberd; "Our Guests," Winslow Anderson, of San Francisco; "Woman," Dr. Lyman Beecher Todd, Lexington, Ky.; "The Medical Purveyor, Handmaiden of the Physician," Dr. A. L. Hummel, Philadelphia, and the "Old Guard," by Dr. R. Beverly Cole. Other speakers were: Dr. Lane, President of Cooper Medical College; Dr. Taylor, San Francisco; Drs. P. O. Hooper, John B. Hamilton and John Morris.

Respiratory Paths in the Cord.—Dr. W. T. Porter, before the American Physiological Society, read a paper with this title. He noted Rosenthal's work on the automatism of the respiratory center, and the fact that the exact location of the center had not yet been determined. He showed, however, by the fact that, although some irregular movements of the diaphragm take place after separation of the cord from the medulla, no full, regular, respiratory movements occur, that there is no automatism in the cord so far as respiration is concerned.

He then detailed many experiments made to trace the

path or paths of respiratory impulses from the center through the cord.

His first experiment was to make a hemi-section of the cord on one side at the level of the second cervical vertebra; then a hemi-section on the other side at the level of the point of the calamus scriptorius, of all excepting a very small portion of the outer part of the lateral tract.

Breathing stopped at once, but after a few minutes of artifical respiration the breathing began again and continued.

Later the remainder of the lateral tract was cut, and then breathing stopped again and could not be restored by artificial respiration, showing that the respiratory impulses descend in the lateral tracts, and that they do not cross between the two points above mentioned, at which the sections were made.

Dr. Porter detailed many more experiments similarly carefully made; and as to the place of crossing, suggested in general three possible solutions, viz., the crossing occurs between the bulb and the phrenic center, or at the level of the phrenic center, or by no definite path, but diffusely, anywhere.

From his experiments, which were too great in number to give in detail, he deduced the conclusion that the respiratory impulses pass down the cord through the outer part of the lateral tracts; that they can and do cross on their way down without dyspnœa; that they do not cross diffusely in any and all parts of the cord; that they do not cross between the level of the bulb and that of the phrenic nuclei, that they do cross at or about the level of the phrenic nuclei, viz., in the region of the fourth cervical vertebra.

He further suggests the following interesting hypothesis: That the fibers descending in the lateral tracts and transmitting the respiratory impulses end at the level of the phrenic nuclei in arborizations; that each phrenic motor cell has two sets, or two sorts, of branches, the axis cylinder and the protoplasmic or dendritic processes; that the latter have two distributions, some (the greater part) end on the same side, the other cross to the other side of the cord, and both come into contact with the end arborizations of the fibers from the respiratory centers. Thus the end aborizations of each respiratory fiber are in contact with phrenic cells of both sides.

That ordinarily the impulses will follow the path where there are the greater number of processes or dendrites; but that if this part be disturbed or obstructed or cut off, they then can take the other one; crossing to the other side of the cord and following down the phrenic of that side.

Dr. Porter claims that the only point of this hypothesis which does not rest upon established anatomical, histological and physiological facts, is the relation of transmission to the number of dendrites.

Vivisection Defended in an English Literary Journal.—Medicus, in the *Humanitarian* for August, thus comes to the defense of this much-derided physiological subject:

Vivisection has produced the most important results—every important result that we have. Harvey could not have discovered the circulation of the blood without experimenting on animals, and Harvey's discovery would have been valueless without further research. The results obtained in this way are innumerable. The following are only a very few: There is the discovery of the localization of function in the brain, by Hitzig and Fritsch, whose experiments were afterwards widely expanded by Ferrier. The investigations of Pasteur and Devaine into septicæmia led to the discovery of most of the germs of zymotic disease. We have learnt from experiments on animals how to perform an enormous number of operations on man, such as excision of the larynx and of the kidney, the treatment of glaucoma and of bone disease, the removal of tumor from the brain, and the cure of that horrible disease myxœdema. We have discovered the functions of the motor and sensory nerves, the nerves that regulate circulation, the functions of the heart and liver, the capillary circulation, the lymphatics, and the whole of the functions of the nervous system. It was Galen, from whom vivisection practically dates (130 to 190 A.D.), who found out that the nerves were motor and sensory, and were the means of conduction of impulses from the brain to the muscles, and from the skin to the brain. The next step to this was made by Sir Charles Bell, who found out by cutting and exciting the spinal roots of the nerves that the two great groups of impulses ran in different channels in approaching the spinal marrow. His results were supplemented by Majendie, to whom belongs the credit of having completely solved this vital and fundamental question.

As a prelude to this statement of the scientific necessity and value of vivisection, he reminds the anti-vivisectionist, that

When anæsthetics are properly applied, and the means for so doing are as perfect for animals as they are for human beings, the experiments

are absolutely painless. Much has been made of the inoculation of diseases into animals. It is the only possible method of investigating the nature of contagious and infectious diseases, their origin, symptoms and cure. It is moral to sacrifice animals (where necessary) for the saving of human life and for teaching us how to save human life. Animals suffer much less than human beings. Mental or subjective suffering they have none, and in very many cases they are not even seriously inconvenienced in a physical sense. For instance: a monkey which has undergone trepanning, and from which a portion of the brain has been removed, will be seen half an hour after its return to consciousness sitting on a perch eating apples as if it had nothing the matter with it. I could give hundreds of other instances to prove that the suffering of animals from disease are not great.

Indecency in Photography is the caption of a somewhat just complaint of Medicus in the *New York Medical Journal*, June 9th, and the burden of a commendable editorial on the same subject and in the same number, under the caption of "The Craze for Photography in Medical Illustration."

Doctors and Railroads.—*American Surgery and Gynecology*, discussing their relation, says:

Certain is it that the time is close at hand when no physician will work for a railroad company with an annual pass as his only compensation. On some railroad systems, already, a schedule of prices has been adopted by which payment is made to every local surgeon in proportion to the amount of work that is done. Dr. S. S. Thorne, of Toledo, for instance, will not appoint a physician as his local representative who offers his services in exchange for a pass. He says: "A man who is willing to work for a pass alone is not good enough to be my local surgeon;" and his general manager sustains him in his position. The pass is tendered as a mere matter of convenience and as a compliment—as to many thousands of other employés. The sooner railroad companies understand that "the physician is worthy of his hire" the sooner will they secure the services of the very best men along their lines and the less will be the ultimate expense of the hospital department.

Medical Men and Medical Matters in San Francisco.—The Eastern visitor is agreeably surprised at the progress of San Francisco and the progressiveness and abilities of her physicians.

We acknowledge pleasant courtesies and extend thanks for much valuable information, to Doctors R. Beverly Cole, Cooper Lane, Winslow Anderson, and the charming and talented lady physician who assists Doctor Anderson both

professionally and hospitally, Mrs. Doctor Waterhouse, and to the charming wife of Doctor Anderson, who was also Doctor A.'s best assistant in doing appropriate courtesies and honors. We also return thanks to Doctor Southard and Doctor McNutt, and to a doctress in embryo, nameless here, but not, we hope, forevermore.

The physicians of San Francisco take good care of their professional and financial interests, and keep abreast of the times in matters medical. The two prominent regular schools have graded lessons and four-year courses of instruction. The Cooper College has now finished and ready for occupancy, with all modern improvements, a splendid hospital attached to the college; and the California University College has arranged to build a splendid new college building adjoining the new City and County Hospital. The French citizens and physician have just completed a magnificent building on the pavilion plan, and Doctor Winslow Anderson and others have private hospitals.

These, besides the usual church medical charities, give the chief city of the Occident a good provision for their sick and ample facilities for clinical instruction.

Both medical colleges receive women matriculants and both sexes work in a common dissecting-room.

The American Journal of Insanity Announcement.—Managing Editor for the Committee, Richard Dewey, M. D., 1112 Venetian Building, 34 Washington Strcet, Chicago. Publication Committee, Edward Cowles, M. D., Boston, Mass., Henry M. Hurd, M. D., Baltimore, Md.; Richard Dewey, M. D., Chicago, Ill.

To the Members of the American Medico-Psychological Association, Alienists, Medical Jurists and Members of the Medical Profession, especially in Neurology and Mental Medicine:

The *American Journal of Insanity*, published quarterly for fifty years at the State Hospital for the Insane, at Utica, N. Y., has always been the leading publication of its class in the United States, and it is therefore believed that the following statement with reference to its management will interest the readers and subscribers of the *Journal* as well as others to whom it is addressed.

At the last meeting of the American Medico-Psychological Association in Philadelphia, a committee was

appointed to consider the question of establishing a journal which should be the organ of the Association. This committee was also empowered to act in the matter, and consisted of Edward Cowles, M. D., Henry M. Hurd, M. D., and Richard Dewey, M. D.

After careful examination of all the circumstances, and especially in consideration of the fact that the Association in its very inception had as one of its objects the publication of a journal, the committee entered into negotiations with Dr. G. Alder Blumer, editor of *The American Journal of Insanity*, and through him, with the managers of the Utica State Hospital, under whose sanction the *Journal* has been published for fifty years past. The result of these negotiations was the purchase of *The Journal of Insanity* by the American Medico-Psychological Association.

The Association, and the medical public, comprising the readers of the *Journal*, have been served faithfully and with conspicuous ability for a half century by the self-sacrificing and unrequited labors successively of Dr. Amariah Brigham, who founded the *Journal* in 1844, Dr. T. Romeyn Beck, Dr. John P. Gray and Dr. G. Alder Blumer, as well as the medical staff at Utica and members of the staffs of other institutions. But it is believed that the Association has not the right to ask the continuance of such service, on account of the increased amount of work, due to the growth of the Association and of its various interests—also in view of the fact that a journal which shall fully represent the Association now requires the devotion of a larger share of time and energy than can be spared from his official duties by any officer of an institution for the insane. The committee has therefore undertaken the publication of the *Journal* for the coming year, pending more definite arrangements by the Association. Upon the request of the other members of the committee, Dr. Dewey has consented to assume the immediate editorial charge of the publication.

The general form and scope of the *Journal* will remain substantially unchanged, and the office of publication will be removed to Chicago. The new arrangements will necessitate some delay in the appearance of the July number.

The *Journal* will endeavor to make itself serviceable and valuable, as heretofore, to the body which it immediately represents and to increase its value and service in

the field of psychological medicine, and not only so, but to furnish material which shall be of living interest to the general practitioner and members of the legal profession as well.

The *Journal* will seek to contribute to scientific progress and to the most enlightened care and treatment of all who are sufferers from mental disease. Its columns will be open to members of the Association and others for free interchange of thought and discussion of questions of general interest to its readers.

The year begins with the July number. With the earnest purpose of laboring for increasing usefulness and success for the *American Journal of Insanity*, until the Association shall relieve us of our responsibility we have the honor to be very respectfully, your obedient servants, Edward Cowles, M. D., Henry M. Hurd, M. D., Richard Dewey, Committee in charge of the *Journal.*

Its table of contents will embrace: I. Original papers on insanity in its ætiological, clinical, pathological, medico-legal, therapeutic and other relations. II. Reviews of current literature in home and foreign journals. III. Book reviews. IV. Editorial notes and comments, also news of the institutions. V. Correspondence from home and foreign writers, and personal notices. VI. Official notices, appointments, resignations, etc.

CORRESPONDENCE.

UTICA STATE HOSPITAL, Utica, N. Y., July 12, 1894.

To the Editor of ALIENIST AND NEUROLOGIST, *St. Louis, Missouri:*

DEAR SIR:—I have the honor to announce that the *American Journal of Insanity*, which has been edited and published at the Utica State Hospital for the past fifty years, has lately been sold and transferred to the American Medico-Psychological Association, of which society it will henceforth be the accredited organ.

The journal will be edited *ad interim* by a publication committee, consisting of Dr. Edward Cowles, President of the Association, Boston, Mass.; Dr. Henry M. Hurd, Secretary of the Association, Johns Hopkins Hospital, Baltimore, Md.; and Dr. Richard Dewey, Chicago, Ill., with the last-named gentleman in immediate editorial charge.

Until further notice it will be published in Chicago, Ill.

Exchanges, books for review, and all business communications should be addressed as follows:

"DR. RICHARD DEWEY,
"Managing Editor, *American Journal of Insanity*,
"34 Washington St., Chicago Ill."

REVIEWS, BOOK NOTICES, ETC.

THE ETIOLOGY OF OSSEOUS DEFORMITIES OF THE HEAD, FACE, JAWS AND TEETH. By Eugene S. Talbot, M. D., D. D. S. Third Edition, revised and enlarged, with four hundred and sixty-one illustrations, 422 of which are original. The W. T. Keener Company, 96 Washington St., Chicago. 1894.

This is an interesting presentation of the subject in entertaining form from a dentist's stand-point. The book is well illustrated with representations of the palates, throat, jaws and facial peculiarities of disease, especially of neurotic disease and degeneracy, as well as normal types for clinical comparison. The author takes issue with Clouston in the relation of the hard palate to brain development and aims to show the "fallacies" of this eminent English alienist's theories. Hutchinson's teeth, other dental abnormalities and deformities, supernumerary teeth and cleft palate come in for a share of the author's attention from the stand-point of dental observation and practice, while neurotic and the neurosal aspects of all of these deformities and peculiarities are well discussed in the book.

The relation of the author's subject to genius, to neuropathic degeneracy—insanity, sexual degeneracy and prostitution, are considered.

The effect of social intermixture on change of osseous type and in the production of peculiarities of form, are noted, the study of criminal anthropology in relation to cranial development, has been followed by the author in the lines of Lombroso and Lydston. In the study of prostitutional and osseous degeneracy, the researches of Kiernan, Harriet C. B. Alexander, Lombroso and other eminent contributors to this subject, in previous editions of the ALIENIST AND NEUROLOGIST, have been liberally drawn upon.

"Prostitution and Sexual Degeneracy" (Chapter XI.), "Moral Insanity, Pauperism and Inebriety" (Chapter XII.), "Neurotics" (Chapter XIV.), "Idiocy" (Chapter XVI), and the chapters on "Neuroses of Development" will specially concern the alienist and neurologist readers of this journal. The entire book, from introduction to conclusion, will entertain the thoughtful scientific observer, who desires to view the subjects of his investigation from every stand-point of observation, and the historical sketch is equally entertaining with the context following.

The most extensive and thorough observation tends to prove that these deformities are usually of constitutional and not local origin, as the author contends, a fact which, when more generally recognized, will set the surgical mind to more conservative thought and conclusion, with reference to some other congenital deformities, for which the knife or

armamentaria *chirurgicæ* are now thought to be the sole and all sufficient remedies.

The reader will be struck with the many references to be found in this book to distinguished contributors to the ALIENIST AND NEUROLOGIST besides those already quoted, who have some peers in the profession, but few superiors, whose names have not, or do not at times appear in its pages as contributors or collaborators.

In some respects the author's diction and logical connection of paragraphs might be improved, but this is a minor matter, where there is meat for mental digestion and fairly well prepared.

LECTURES ON AUTO-INTOXICATION IN DISEASE, OR SELF-POISONING OF THE INDIVIDUAL. By Ch. Bouchard, Professor of Pathology and Therapeutics, Member of the Academy of Medicine, and Physician to the Hospitals, Paris. Translated, with a Preface, by Thomas Oliver, M. A., M. D., F. R. C. P., Professor of Physiology, University of Durham; Physician to the Royal Infirmary, Newcastle-upon-Tyne, and Examiner in Physiology, Conjoint Board of England. In one Octavo volume; 302 pages. Extra Cloth, $1.75 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This, in our judgment, should prove an intensely interesting volume to the practicing physician. It discusses pathogenic processes and poison production and elimination, the toxicity of urines, their cause, toxic principles, their origin and the part they play in producing uræmia, toxicity in the blood, the pathogenesis of uræmia, auto-intoxication of urine and bile, gastric disorders, poisoning accidents in diabetes and many kindred subjects.

The author thus controverts the current view of uræmic poisoning:

"There yet remains to be known what is or what are the poisons which determine the toxic and chemical accidents of uræmia.

"As for myself, relying upon my own experiments, I say that urea, in the quantity in which we meet with it in the organism, in pathological states, cannot be invoked to explain the accidents called uræmic.

"Gallois has injected into the stomach, Treitz into the veins, and Richardson into the cellular tissue, large doses of urea. Gréhand and Quinquaud have likewise injected it into the cellular tissue. These last observers have seen toxic accidents. Treitz, who has made injections into the veins, has not observed anything. Hammond practices nephrectomy and then makes an injection of urea,—the animal dies. The experiment of Hammond is repeated by Frerichs, Oppler, and Petroff, and these conclude that after nephrectomy the animals, into which they injected urea, do not die more quickly. This contradiction was so singular that Feltz and Ritter have repeated the experiment. They have at length induced death as speedily in healthy animals as in those upon whom they had performed nephrectomy. They employed urea which they had sent from Germany, so as to have it purer. The verification made, it contained sulphate and chloride of ammonia. Ritter began to prepare pure urea himself, and, setting out from the day in which he made injections with this urea, he no longer deter-

mined accidents. Such is, perhaps, the explanation of the contradiction between various experimenters.

"In order to kill a man it would require the quantity of urea which he makes in sixteen days. But, in double calculous obstruction, suddenly developed, uræmic accidents appear—sometimes at the end of the second day or at the commencement of the third—at the time that man has not yet made the eighth part of that amount of urea which is necessary in order to cause death. But during that time, as we know, he has been able to accumulate sufficient of other toxic substances to bring about intoxication. Clinical observation is here, therefore, completely in accordance with experimentation in denying to urea the power of producing the intoxication called uræmic."

The profession is certainly indebted to F. A. Davis & Co. for giving them a translation of this valuable book and at a price so moderate.

AN INTERNATIONAL SYSTEM OF ELECTRO-THERAPEUTICS: FOR STUDENTS, GENERAL PRACTITIONERS AND SPECIALISTS. By Horatio R. Bigelow, M. D.; and Thirty-eight Associate Editors. Thoroughly illustrated. In one large Royal Octavo volume, 1160 pages, Extra Cloth, $6.00 net; Sheep, $7.00 net; Half-Russia, $7.50 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This large volume is chiefly a compilation of other well-known writers on the therapeutic uses of electricity, with the author's comments and experience added. It is well illustrated and clearly descriptive in its text, and will prove of practical value to the general practitioner, and especially to the gynecological specialists, among whom the author is classed. The name of the publisher is sufficient commendation of the mechanical execution of the book.

NORTH AMERICAN SPECIES OF SAGITTARIA AND LOPHOTOCARPUS. By Jared G. Smith.

The lovers of American botany will be instructed and entertained by this volume. The illustrations are good and only need coloring to make them perfect. The author is a painstaking enthusiast, thoroughly in love with his profession, and has done his work well in the book before us.

SECRET NOSTRUMS AND SYSTEMS OF MEDICINE. A Book of Formulas. Compiled by Charles W. Oleson, M. D. Fourth Edition, Revised and Enlarged. Oleson & Co., Publishers, Chicago, Ill.

This is a book that will interest physicians and pharmacists, as it contains the formulæ of many publicly well-known preparations and compounds, and will serve to show the enormous profits made from simple secret mixtures, as well as the gullibility and remarkable credulity of the public as to the efficiency of secret preparations.

Brain and Nerve Exhaustion (Neurasthenia), and on the Nervous Sequelæ of Influenza. By Thomas Stretch Dowse, M. D., F. R. C. P., Ed. Fourth Edition. Published by Baillière, Tindall & Cox, 20 and 21 King William Street, Strand, London, Eng.

A good book by a good author, in which a very creditable attempt is made to explain the physiology, pathology and causation of the disease. The book, however, is exceedingly incomplete in its reference to the literature of its subject and rather unsatisfying to the philosophical medical mind of extensive clinical experience with this disease as it is to be seen in this country.

But as everything on this interesting subject is eagerly sought after by the neurological clinician, this book cannot be equaled. The author has some peculiar views, and they are well expressed.

Les Grands Aliénistes Francais. Par Le Dr. René Semelaigne, Tome Premier, Phillippe Pinel, Esquirol, Ferrus, Jean-Pierre Falret, Félix Voisin, Georget. G. Steinheil, Editeur, 2 Rue Casimir—Delavigne.

We acknowledge the receipt from the hand of the distinguished author, the above most interesting and valuable book, in which galaxy of lives, stars illustrious shine in lives sublime, brilliant and glorious, over the firmament of French psychiatry, illuminating the world of psychiatric and psychologic science for all time. They are all stars of the first magnitude, on which the world looks with wonder, and from which the present generation of psychiatrists receive light and inspiration. Morbid psychology lay hid in night till these stars shone, when all was light. *Vive le psychiatrie! Vive la France!*

Milk: its Adulteration and Relation to Infectious Diseases, with Remarks on Food Adulteration in General. By Winslow Anderson, A. M., M. D., M. R. C. P., Lond., etc.

This is a scientific, popular, intelligible and practical presentation of an important subject by an expert, which, if generally appreciated and acted upon, would speed the coming sanitary emancipation of the people and avert the doom of untimely death that now comes to so many civilized people.

Practical Urinalysis and Urinary Diagnosis is an important new book just announced, with numerous illustrations, including colored photo-engravings. By Charles W. Purdy, M. D., of Chicago, author of "Bright's Disease and Allied Affections of the Kidneys," "Diabetes: Its Causes, Symptoms and Treatment," etc.

The well-known house of The F. A. Davis Company, 1914 and 1916 Cherry St., Philadelphia, will issue the work in September, 1894. The book will be first-class in quality of paper, press work and binding, and sold at the reasonable price of $2.50, net, in extra cloth.

Sajous' Annual.—In Vol. IV. of Sajous' most excellent Annual for 1893 is the Section on "Ophthalmology," abstracted from current medical literature by Dr. Wm. Oliver, assisted by Dr. Wm. Campbell Posey. These careful collaborators have done their work well and have here furnished us with a clear and concise review of ophthalmology in all parts of the world for last year.

The subjects are so arranged that one can readily refer to any department he wishes particularly to investigate, and by the complete table of references, the journal in which the original contribution is found may be easily ascertained. It serves as an *index rerum* and supplies the place of the ordinary and usual imperfectly kept book of this title. The thoroughness with which these gentlemen have done their work reflects great credit upon them in point of industry, judgment and ability. The following very natural and practical order has been adopted in this work:

Sec. I. Congenital Anomalies, Embryology and Histological Anatomy.

Sec. II. Refraction and Accommodation.

Sec. III. Diseases of the Orbit; Diseases of the Lachrymal Apparatus; Diseases of the Extra-Ocular Muscles; Diseases of the Lids; Diseases of the Conjunctiva; Diseases of the Cornea and Sclerotic; Diseases of the Iris and Ciliary Body; Diseases of the Lens; Diseases of the Vitreous; Diseases of the Retina; Diseases of the Optic Nerve; Wounds, Injuries and Foreign Bodies; Glaucoma.

Sec. V. Medical Ophthalmology.

Sec. VI. Therapeutics and Instruments.

While the year 1893 shows no very great discoveries in ophthalmology, there is evidence of the most careful research and painstaking investigation of the yet unsolved problems of physiology and pathology, and there is evidence of steady and satisfactory progress along these lines. There is plainly manifest two important features in the year's work; viz., a more conscientious and scrupulous observance of antiseptic rules in all surgical procedures, and stricter attention to surgical technique.

With better knowledge of physiological phenomena, and a more thorough understanding of pathological processes and causative agencies, there is a correspondingly increased ratio of successes in both surgical and medical ophthalmology, so that it may reasonably be claimed for it that it nearest approaches an exact science of all the branches of medicine. The neurologist and ophthalmologist have been brought into more intimate relations by their mutual labors in the study of cerebral localizations, the one aiding the other, eye symptoms being of extreme importance in studying intracranial lesions. While the whole medical world has contributed largely to the literature of the eye, the laborers in this field on this side the Atlantic have contributed more largely upon the subjects of refraction and muscular troubles. There has been a very lively interest manifested in these branches by American

ophthalmologists for several years past, and much progress made, both in the discovery of means to aid in their detection, and also in the adoption of methods for their correction. The importance of a thorough knowledge of the functions of the eye in relation to many obscure and seemingly remote conditions has been made apparent to the general practitioner, and has awakened in him a more lively interest in the abnormalties of this organ.

Considerable progress is noted in the study of ocular reflexes, and further study will enable us, ere long, it is to be hoped to place them upon a sound physiological basis, and to adopt a rational and successful treatment in those obscure cases, occasionally met with, that discourage both doctor and patient.

Upon the whole it may be said that ophthalmology is keeping pace with the other advancing branches of medicine and surgery; and, in conclusion, this reviewer would recommend to every physician this most excellent work, "Sajous' Annual." T. E. Murrell.

Stone's Biography of Eminent American Physicians is the most complete, as it is the most recent, work of its kind extant. The materials of this great and meritorious work have been judiciously collated and placed in readable form with rare judgment and graphic skill, the whole constituting an instructive volume for the younger, and an entertaining one for the older members of the profession. Within its well written pages are hosts of character examples, worthy of emulation by the rising generation of medical men, and of the esteem, veneration and laudation of the people. The industry, the heroism, the sacrifices, the devotion to duty, to humanity and conscience of medical men cannot be too often brought before mankind, and their noble work for the weal of the world has never been better portrayed than in the worthy book before us. It should be in the library of every physician and humanitarian of America. The publishers are Carlen & Hallenbeck, of Indianapolis.

The Arena for May, among its many interesting articles, contains one "The Power of the Mind in the Cure of Disease," by James R. Cocke, M. D., and one on "Heredity," by Helen H. Gardener, both of which will interest the many not medical, as well as medical, readers of this journal.

"The Religion of Lowell's Poems," by M. J. Savage, is one of the best of its literary contributions.

The American Journal of Psychology for June contains studies on the psychology of touch, by F. B. Dressler, and other contributions of other authors of special interest to readers of the Alienist and Neurologist. In this number the excellent article by Dr. John Punton, of Kansas City, on "The Treatment and Prophylaxis of Insanity," is abstracted from Vol. XV., pages 52–56 of the Alienist and Neurologist.

Vol. I., Funk & Wagnalls Standard Dictionary.—The Press criticisms, both English and American, just coming to hand, are wonderfully unanimous in praise of the work. This Standard Dictionary, as noted by the *Mark Lane Express Agricultural Journal*, is not a revision of an old dictionary, but really a new work, and it is destined to rank as the leading dictionary in the United States. Complete, careful, exact and erudite in every definition, it has justly received the approbation of the most distinguished English and American philologists, and must, because of its superior merits, become the popular dictionary of the most cultivated Americans, unless the first volume should prove to be not a fair sample of its successors, which we regard beyond probability. In this volume all disputed spellings and pronunciations have been referred to an advisory committee of fifty philologists in American, English, Canadian, Australian and East Indian universities and representative professional writers and speakers of English. The differences of pronunciation are shown in the appendix of the book, and disputed spellings and pronunciation will be found given by each member of that committee. Many words specially relating to chemistry will be found in a changed form, the nature of which may be gathered from the word sulphur, which is spelt sulfur, a style adopted also for all of its derivatives, as sulfate, sulfide, sulfuric, etc The final "e" is dropped in such words as sulphide, sulphite, etc. These changes have been adopted principally at the desire of the Chemistry Section of the American Association for the Advancement of Science. It is a beautiful book with numerous illustrations of different subjects, portraits of representative horses and cattle indicative of breed; and similar representations of other animals; also of birds and fishes, the flags and insignia of nations, society badges, precious stones and the implements of industry.

It is easy of reference and of great utility to the busy student. It is far less cumbersome and less objectionably prolix in its definitions than the "Century Dictionary," while lacking nothing essential as a clear and complete lexicon. Our rapidly augmenting language and our utilitarian age demands just such a dictionary as we have promise of in the handsome and concise and complete volume before us, and the well-known character of its publishers, Messrs. Funk & Wagnalls, give certain assurance that the promise will be fulfilled. The ghost of Dr. Johnson, whose Herculean labor brought forth a volume of forty-five thousand words, would stand aghast, were he alive now, at this gigantic undertaking, presenting three thousand indispensable definitions. But we have not space to detail the many special excellencies of this great work. Besides the perfection of its definitions, it is a thorough book of synonyms and a complete *thesaurus* of the language, and eminently deserves the title of the Standard American Dictionary.

The Railway Surgeon.—The Official Journal of the National Association of Railway Surgeons is published every other Tuesday, at Chicago. The first three numbers of this publication, which was begun last month, devoted to the interests of The National Association of

Railway Surgeons, are on our table. We exchange with the excellent publication, with pleasure, and commend it to all interested, with much pleasure.

Railway surgeons will find this journal specially adapted to their special needs in practice.

Medical Orthoepy. By J. F. Oaks, M. D., Columbia. The aim of the author is correct pronunciation, but correct pronunciation by the same author in either the Continental or English pronunciation is exceedingly harsh to the writer of this pamphlet. "Mongrel pronunciation is as unpleasant to the ear as orthographical monstrosities are to the eye" of this writer.

We do not share the author's discomfort. It is the duty of the scholar to be familiar with both methods, and to employ the most euphonious till the radical orthoepists of both sides get tired and a wise conservatism shall have settled this vexed question of pronunciation. One rule in speaking is to adapt our pronunciation to our company, so as not to grate harshly on the sensitive tympani of those extremely sensitive orthoepists.

Fracture of the Skull; Trephining; Retro-Anterograde Amnesia; Recovery; Death One Month Subsequently from Other Causes; Autopsy. By Edmund J. A. Rogers, M. D., and J. T. Eskridge, M. D., Denver, Col.

Ueber die Wechselbeziehung zwischen der gewöhnlichen und sensoriellen Anästhesie (Functionsabnahme der Sinnesorgane) auf Grund klinischer und experimenteller Daten. Von Prof. W. v. Bechterew.

Operative Surgery of the Gall Tracts, with Original Report of Twenty Successful Cholecystenterostomies by Means of the Anastomosis Button. By John B. Murphy, M. D., Chicago, Ill.

Appendicitis; with Original Report and Analysis of One Hundred and Forty-one Histories and Laparotomies for that Disease under Personal Observation. By J. B. Murphy, M. D., Chicago.

Recent Studies in Naupathia, or Seasickness, Symptomatology, Diagnosis, Pathogenesis, and Treatment by a New and Efficacious Method. By Winslow Warner Skinner, M. D. (Par.)

Teno-Suture and Tendon Elongation and Shortening by Open Incision; Advantages and Disadvantages of the Various Methods. By H. Augustus Wilson, M. D., Philadelphia.

Tumor of the Brain Simulating a Vascular Lesion; to Which is Added an Account of the Autopsy, with Remarks. By J. T. Eskridge, M. D., Denver, Colorado.

Asexualization for the Prevention of Crime and the Arrest of the Propagation of Criminals. By F. L. Sim, M. D., Memphis, Tenn.

Index Catalogue of The Library of the Surgeon-General's Office, United States Army. Authors and Subjects, Vol. XV.

The Practical Workings of the New Laws for the State Care of the Insane. By Carlos F. MacDonald, M. D., New York.

La Grippe. By W. D. Stewart, M. D., Toledo.

Reminiscences of the Founders of the Woman's Hospital Association. By Thomas Addis Emmet, M. D., New York.

Duplication of the Spinal Cord, as a Result of *Post-Mortem* Injury. By E. D. Bondurant, M. D., Tuscaloosa.

Vaginal Hysterectomy for Cancer—23 Cases. By W. F. McNutt, M. D., M. R. C. S., etc., of California.

Abstract of Two Articles Treating of Progress of Midwifery. By Hunter Robb, M. D., Baltimore.

The Operative Treatment of Non-Microcephalic Idiocy. By J. F. Binnie, C. M., Kansas City.

Ripening of Immature Cataracts by Direct Trituration. By Boerne Bettman, M. D., Chicago.

A Case of Cysticercus of the Vitreous. By W. Cheatham, A. B., M. D., of Louisville, Ky.

Katatonie. Sequel of a Case. Necropsy. By W. Julius Mickle, M. D., F. R. C. P., London.

The Uric Acid Diathesis and its Treatment. By John F. Barbour, M. A., M. D., Louisville.

The Works of Justine Siegemundin, the Midwife. By Hunter Robb, M. D., Baltimore.

Surgical Clinic, Given at Wesley Hospital, March 31, '94. By F. C. Schaefer, Chicago, Ill.

Conservatism in Accidental Surgery. By Edmund J. A. Rogers, M. D., Denver, Colo.

Aortic Aneurysm and Insanity. By W. Julius Mickle, M. D. F.R.C.P., London.

The Sympathetic Nervous System. By W. F. Metcalf, M. D., Detroit, Michigan.

The Spectacle Treatment of Hypermetropia. By Boerne Bettman, M. D., Chicago.

Subvolution—A New Pterygium Operation. By Boerne Bettman, M. D., Chicago.

Detecting Sugar in Urine. By The Fraser Tablet Triturate Mfg. Co., New York.

A Case of Double Vagina, with Operation. By Hunter Robb, M. D., Baltimore.

Syphilis and the General Practitioner. By G. M. Phillips, M. D., Maysville, Ky.

Brain Surgery, with Report of Nine Cases. By F. C. Schaefer, M. D., Chicago.

Pain in Disease. By Dr. Herman D. Marcus, M. D., D. D. S., Philadelphia.

Fraser's Notes. By The Fraser Tablet Triturate Manufacturing Co., New York.

The Limitations of the Use of the Pessary. By Hunter Robb, M. D., Baltimore.

Syphilitische Epilepsie. Von Prof. Paul Kowalewsky-Charkoff.

Moral Health. By Charles Gilbert Chaddock, M. D., St. Louis.

THE

Alienist and Neurologist.

VOL. XV. ST. LOUIS, OCTOBER, 1894. NO. 4.

ORIGINAL CONTRIBUTIONS.

HALLUCINATIONS AND DELUSIONS.*

By WM. M. MCLAURY, M. D., New York City.

I WANT to bring before the Academy of Anthropology a short paper on mind in some of its peculiarities and phases of development. Man in his entirety is a unit; as body and soul, is dual; as body, soul and spirit is triune.

We all know something of man as a body, as a physical body, comprised as a body, composed of organs, capabilities and powers. As a soul, we are taught that he is immortal. All our knowledge of the immortal man is derived chiefly from writers known as inspirational, who define the soul as an immortal being.

If the soul has no end it had no beginning. It is a law of mathematics that whatever has a beginning, has an

* Read before the New York Academy of Anthropology.

end. Everything conceivable, except a mathematical point, has a beginning and an end, and a continuity between the beginning and the end, thus constituting everything triune in character. So we must conclude that, if the soul is immortal, it existed in some form previous to its habitation in the body. Mind, or spirit, is the personification of characteristics of soul, as manifested in our emotions, affections, powers of mind, comprehension, reason, will-power, attention, memory, and all the faculties capable of cultivation through our intelligence.

Life, or force, is universal. It pervades everything. It is the property of all matter. It is electric in its nature and polar in its influences. All force is electric and all matter magnetic. It is a component part of the trinity of nature, that trinity being matter, force and law.

As Avero expresses it, "It sleeps in the rocks, dreams in the animal and awakes in man."

There can be no matter without soul or force, and no soul or force without matter. They are co-existent and co-eternal, and the law governing all is the only deific power.

All passions, fixed ideas, preoccupation of thoughts, may induce hallucination, more especially if the pensive thoughts are intensely fixed on the passions of love, fear or remorse.

Dr. Brewster says that when the eye is not exposed to the impressions of external objects, or when insensible to the objects in consequence of being engrossed with its own operations, any object of mental contemplation, which has either been called up in the memory or created by the imagination, will be seen as distinctly as if it had been formed from the vision of the real object.

An individual who believes he sees supernatural sights can easily persuade others to see or believe they see them also.

Imitation is a powerful agent in the production and propagation of delusions. Example proves contagious. For instance, a man stood intently gazing at a statue. Soon a

crowd collected. He strenuously and earnestly asserted that he saw the head of the statue move or nod, and in a few moments a score of people were sure they saw it nod.

Lawyers are well aware of the art of manufacturing evidence, coaching a witness, by repeatedly telling him or her that they saw or heard a certain act or conversation. The subject so receiving the suggestion, repeatedly and emphatically stated to them, will come to believe that he really saw and heard, and will so testify in court, whereas, in fact, the only knowledge the witness had was what was built up in the testifier's mind by suggestion.

A person may also tell an untruth which he knows to be untrue at the start, but, by repeatedly telling it, come to believe it true in time. Thus many persons have confessed to the perpetration of crimes which they never committed, but by pensively dwelling on them in detail, have come to believe themselves really guilty. One can easily build up an idea in the mind of a child so as to make a most vivid reality. Evidence in divorce cases has been, and still is being built up, by designing parents, in the minds of their own children, so that they will testify that they saw and heard certain things, utterly false, but which, by suggestion, they believed to be true.

Dr. H. F. Drayton, in his work on Human Magnetism, says that there can be no doubt that much evil has been consummated by the employment of magnetized victims, and these poor victims have in some cases borne the punishment of broken laws, while the doubly villainous principal has escaped. The medico-legal records of France contain cases of shocking immorality, in which the perpetrators of the crime were incited to it by hypnotic suggestion.

It is just as practicable to induce people to state things that they have never heard, commit perjury, or swear falsely, being made to believe that what they say is true, also by suggestion.

Bottey convinced a woman that she had seen a certain

gentleman poison an old lady with opium, and when she awoke she hastened to the proper officer to make the accusation against this man.

The fact should be noted as a dangerous feature that the hypnotized person does not, on awaking, remember the cause of suggestion, or from whom he received it, but in a judicial inquiry concerning the act, of one known to be susceptible, *the ends of justice may be promoted* by obtaining testimony from him while in a state of hypnotism, since the memory of what has occurred while in one state of hypnotism, revives in the next. However, it must be stated that the hypnotizer can neutralize even this tendency to revival by an order that the subject shall forget entirely all that was said or done when under control.

The phenomena of Salem witchcraft, as also the epidemics of swoons and trance, may be scientifically accounted for by the hypnotism so frequently met with to-day. People are hypnotized without knowing it.

Napoleon Bonaparte believed in a luck star and consulted oracles.

General Rapp relates that, going one night unannounced into Napoleon's tent, he found him in so profound a reverie that his entrance was unnoticed. After some time the emperor turned around, and without any preamble, seized General Rapp by the arm, saying excitedly, pointing up to the sky, "Do you see that?" The general did not reply, but on the question being repeated, said he saw nothing. "What!" replied the emperor, "you cannot see it! It is my star! It is shining there before you! It has never abandoned me! I see it on all great occasions! It orders me to go forward! It is a constant sign of good fortune!"

Of Cromwell, Denby relates, that on one occasion he was lying on his bed very much fatigued, when the curtains were drawn aside and a woman of gigantic stature appeared to him and prophesied his future greatness.

Bodin relates the hallucinated condition of a friend of his, in which touch, sight and hearing were involved. In

the beginning he heard rappings at his door, after which time whenever he was about to do anything dangerous or improper, he felt a touch on his right ear, and if what he was about to do was to be to his advantage the touch was on his left ear. On one occasion he saw on his bed an apparition of a child of marvelous beauty, clothed in white and purple. Soon afterwards he had a wonderful deliverance from imminent danger.

Guy Patin shrewdly suspects this was Bodin's own personal experience.

In 1890 I had a patient, a man of 33, unmarried, American, of Irish parentage, who had hallucinations and illusions somewhat remarkable. In the daytime, when wide awake, he would have visions of friends, acquaintances and relatives, with multitudes of unknown people, constantly passing before his vision, but with a cloudy indistinctness, much more bulky and giant-like than the natural people; but in the midst of this vision, which would last for hours, he said I was always vividly distinct, and in proper form and shape. Sometimes he could distinctly hear my voice. Then the illusion would disappear.

After these visions had haunted him for several weeks he began to see the doctor (myself) and someone he called the poet. Both appeared clear and distinct. A few weeks later, three people appeared to look natural to him, but with painful distinctness. These three he described as The Doctor, The Poet and The Clog Dancer. The crowds of other people constantly before him were large, vapory and indistinct.

In April he wished me to send him to an insane asylum, fearing he would commit suicide if he was not placed under restraint. I told him he was not insane enough to be committed to the insane asylum, that all he required was to apply himself diligently, at regular hours, to his business, which was that of selling goods on commission.

After repeated solicitations for me to send him somewhere to protect him against himself, I sent him to Dr. Cole, a commissioner of lunacy, who examined him

thoroughly. We went before a Court of Record and had the papers duly administered for his commitment, but before this was done he had improved somewhat and was willing to be guided by me. I advised him not to enter the asylum, assuring him that if he entered he would never come out alive. He was in the habit of coming to see me daily, or three or four times a week, and always claimed that it did him good every time he called on me.

The last time I saw him was the 8th of October, 1890, when I told him I would be away from the city for ten days. He assured me he could not live ten days without seeing me, saying that it was only my influence over him that had kept him alive the last six years; but if he wished to, I told him to call and see my assistant. He did not call. I have had no word from him since, and I fear he has committed suicide, or perpetrated some act for which he has been arrested. I find no record of him anywhere in any of the institutions in which he would be likely to be found.

November 22nd, 1890. To-day I saw a patient who was hallucinated with the idea that people, strangers to her, visit her rooms, scratch the walls, and leave imprints of their hands and feet thereon.

Her sister, who is a religious monomaniac, says that it is because Kate has no religion, that she is so persecuted by evil apparitions. The simple truth is, both sisters have insane delusions, but each differing in character, Annie, the religious devotee, being the more melancholy and miserable of the two.

A patient of mine related to me the hallucination he was under, that certain persons, nurses and doctors, were trying to kill him, and that he was compelled to fight them off to save his own life. He is now convinced that it was all a misconception, but painfully real to him then.

It is this class of cases that give so much trouble to nurses and keepers of insane asylums which so frequently call for investigations for the correction of abuses therein. This patient died of cerebral apoplexy Sept. 14th, 1891.

I have now under treatment an accomplished lady who tells me she hears daily, for hours at a time, sweet, rapturous, vocal music, but it is so prolonged and continuous that it becomes tiresome.

Many persons become hallucinated with the idea that they hear human voices, talking to them, exclaiming vehemently, advising, denouncing and threatening.

Socrates told the Athenians that he was continually influenced to heroic actions and good deeds by a demon. (There were good and evil demons in those times.) These influences to do good were attended by no voice, but he was restrained from evil and danger by a voice. This warning voice was never passed unheeded by him. By strictly observing and attending to the instruction and influence of the voiceless good demon, he could so influence his friends and pupils, and even strangers, as to compel them to do his bidding (independent of word or look) at a distance, or when separated by walls. In the phraseology of to-day, he possessed the power of hypnotizing by thought transference. He also had ecstasies and hallucinations, and some faith in dreams. (From these circumstances M. Lelut concluded that he was insane.) He believed also in the prophetic power of the human soul.

Cognito ergo sum!—the motto of the philosopher Descart. The power to think and think rightly, sanely, embraced the total of human existence. He said all clear ideas are true. Hence he elaborated his Mathematical or Deductive Method. B. Spinoza elaborated and exemplified this philosophy.

Nations as well as individuals become infatuated and deluded.

Christian nations look upon the Mohammedans as the victims of a stupendous delusion.

The followers of Islam are sure that Christians and Jews are deluded. Indeed all sects who are bound individually to each other by dogmas or creeds, each one is assured that all the rest are misled and bound by their delusions, and inasmuch as all are superstitious, they give

better judgment on the faith of others than on their own. The only class of individuals who are free from superstitious delusions are the philosophers who are searching for truth for truth's sake, and are willing to follow where she leads, even to blank materialism.

Church people look upon modern Spiritualism as a delusion, yet they are very ready to believe in Bible Spiritualism, which philosophers would accept or reject, one or both, according to the amount of rational evidence either might be able to produce.

Such Bible teaching as "the handwriting on the wall," at Belshazzar's feast, and "the transfiguration on the mount," with several other incidents of like import, would at once be recognized as material manifestations of spirit power, as claimed by modern Spiritualists, and may occur in our day and generation as truly as in Bible times.

Since the time that Herodotus, the father of history, began to write, we have in every generation manifestations of spirit presence and power recorded, under various names and in all countries.

Hypnotized subjects lose their will-power, because they are dominated by the thought, will and suggestion of another, and they cannot rise higher in moral sentiment than that which actuates or inspires the hypnotizer.

Inasmuch as persons of rare acquirements, good mind and intellect, may be held under the hypnotic influence of persons every way inferior to them and without their being aware that they are so influenced, is to be deplored by everyone devoted to the welfare and development of our race. I believe from my own observation of cases, persons may become insane or idiotic by the persistence of the hypnotic suggestion.

Dr. Rush relates the case of a young lady who had been for some time confined in a lunatic asylum whose only indication of insanity was indifference and even hatred to her parents, whom she had previously devotedly loved.

At length she one day acknowledged with pleasure her filial attachment and was soon afterwards discharged, entirely recovered.

There is a great variety in the manner and degree to which the mind is influenced by hypnotism and other extraneous and erroneous impressions. In many cases it effectually changes the whole character of the individual. Its general tendency is to lower the moral tone. Accustomed occupations become odious; the nearest and dearest friends become objects of indifference or aversion.

Abercrombie relates the case of a wealthy man who became hallucinated with a matter of business, of a trifling nature, which rendered him callous to the most important and serious incidents, destroying his affection for his family. The death of one of his children occurring at the time, did not affect him or depress him in the slightest degree.

Those who were present on the evening of February 3rd and listened to the very interesting and instructive paper on "Phrenology and the Physician," by our esteemed ex-Secretary, Dr. Laidlaw, may recall the remarks of Prof. Nelson Sizer, in discussing Dr. Laidlaw's paper, where he related the complete recovery of cases of many years' duration, as well as recent ones, by the local treatment of the areas of the brain.

Doctors and others familiar with people suffering from delusions and hallucinations know that for twelve, fifteen or twenty years they will harp on the one subject in their delusion, and be fairly natural on other subjects. Prof. Sizer would point out the brain area to be treated by the phrenological action, of the particular mental condition of the patient.

A captain in one of the regiments serving in the war of the Rebellion, who was for several weeks a prisoner at Andersonville, returned home at the close of the war with shattered health. A few years later he became hallucinated with the idea that he had committed the "unpardonable sin." This so depressed him that eventually

his friends were compelled to send him to an insane asylum, where I visited a few weeks later.

The first time I saw him there, one of his sisters was with him. As I entered, he exclaimed with excited voice and manner: "Well, if there isn't the ghost of Dr. McLaury." I replied, "Why do you call me a ghost, Captain? You may assure yourself that I am something more real than a ghost." His reply was, "Well, you know I died at such a time (mentioning about the time he was committed), and as I had repeatedly told you that I had committed the 'unpardonable sin,' and at death should immediately pass into hell. Now I know I am not in hell—I am sure I am not in heaven—I cannot tell where I am, but I know that the ghosts of my earthly friends appear to me. This is the first time that you have appeared, but my sisters and Masonic friends frequently appear, but whether you are Dr. McLaury really, or a ghost, I want a little private conversation with you."

This patient recovered suddenly, to the surprise of all the doctors who saw him. I have now under observation a member of the legal profession, who is continually annoyed by people trying to electrify him. He fancies he hears them in the walls and ceilings of his house; they are continually plotting his ruin, and that of his family. He frequently calls his sisters in the middle of the night, to help him to resist their evil machinations. I have scores of letters that he has written to me on this subject.

HE'S BLOWN TO PIECES FREQUENTLY.—A MAN WHO THINKS HIS BODY IS PIERCED WITH ELECTRIC WIRES.

The man in the Hudson County Insane Asylum who was afflicted with the idea that he had a telephone in his stomach now thinks he is being tortured with electric batteries. This man was a telephone crank before the first telephone was put in use. It has been his hobby for a year or more. He began to hear voices talking to him wherever he went. Soon after the first telephone came into use he visited a place where there was one to experiment with. The instant he heard a real

voice through the transmitter he became violently insane. He smashed the instrument to pieces. He was taken to the Hudson County Asylum in a strait-jacket, and has been there ever since. He was one of the curiosities of the asylum. He talked rationally on any subject that visitors chose to talk about, but right in the middle of his conversation, without any warning, he would exclaim:

"There's that fellow again, dang it all. Hello! hello! down there: what's wanted? Now, just hear him ring that bell, as though I didn't hear and answer him. Hello! I say, down there, hello! Well, if he won't answer, let him go."

Then he would resume conversation just where he left off. Sometimes he would think the imaginary voice answered him, and would carry on a long conversation with him, always at the end complaining of the rumpus the fellow created in his stomach.

The officials of the asylum don't know what caused him to change his delusion. It was done suddenly. One day recently, when the doctor talked with him, he said: "This is awful, doctor. Those batteries down stairs have got to be taken out. They are killing me." The doctor asked him for an explanation, and he said that "a lot of batteries had been put in the cellar, and that wires running from them went right through his body. Then they turned them on!" he exclaimed, and began to dance up and down and shout and cry out in apparent agony. At last he gave an extraordinary loud shout, and his arms and legs flew out and about in every direction.

He explained afterward that he had been blown to pieces by the electricity. At intervals ever since then he has had similar spells which very often ended in his blowing to pieces. He acts and talks rationally nearly all the time. In the midst of one of these spells one day the doctor said to him. "You are only fooling yourself. There is no battery and no electric machinery in the cellar. Come with me and I will show you."

The man accompanied him gladly. The cellar was searched thoroughly. When the search was concluded the man turned to the doctor and said: "You are a foxy doctor, ain't you. You knew you would bring me down here, and so you had it all taken away to fool me, but you can't do it." The doctor went back up stairs with him. At the head of the stairs the man said: "There, you pressed the button and it's back again. You don't dare take me down now."

There are many cases recorded of cures being effected, as well as insanity caused, by accidental blows on the head.

Dewes cites a case of a man who left his house at night with the determination of drowning himself, when he was attacked by robbers. He did his best to escape

from them, and having done so, returned to his home with his suicidal ideas entirely dissipated.

Dr. Burrows mentions a similar case of a woman in the act of attempting suicide. An accidental blow on her head changed her purpose and restored her to reason.

A man who was greatly fatigued by a long journey on horseback, and suffering severely from headache, concluded he would have to abandon his purpose of reaching his home, ten miles distant, without taking a much-needed rest. While in this mood of giving up he was suddenly pursued by highwaymen. He urged his horse and escaped them, and when the danger was passed, rode the remainder of the way without weariness or headache.

Last August I attended at one of the hotels in this city the wife of a hotelkeeper at Galveston, Texas. They were on a visit of pleasure to New York. The lady was ill before leaving home, and became very sick the second day after their arrival. In ten days she had so improved that they returned to their Southern home.

I had a letter from her husband a few days ago, informing me that she had kept up the treatment for a month and that she has never been so well since he knew her, as since her return, but she has no distinct recollection of anything of her visit to New York but my attendance, daily visits and treatment. All that she remembers distinctly to the minutest detail, and now she wishes to return and complete her visit.

A lady, 30 years of age, suffering from a fatal illness, told her nurse shortly before death, that Dr. McLaury had deserted her and sent another doctor to take charge of her. This doctor she said was going to shoot her dead. She was sure of it, as she distinctly saw the pistol under his coat.

My friend Dr. J. L. Campbell, of this city, had a patient, belonging to a wealthy family, who was preparing to celebrate her 17th birthday. They were making extensive preparations, and she was in a high state of pleasurable excitement in her anticipations.

On the morning of the festive day, she slept so profoundly, that she could not be aroused, and for several days seemed most of the time asleep. When she did partially awake, she remembered nothing of all her past life, was dull, stupid, and almost idiotic. Her parents employed all the medical skill that wealth could produce, in her behalf, but she did not improve, until nearly four years later, when she was under no special treatment, she awoke on a Sunday morning bright and early, perfectly clear and lucid, sprang out of bed, and commenced preparations for the party, where she had left off three or four years before, and wondered at the indifference of her family in regard to her birthday.

I believe she continues well. I can only account for these cases of sudden recovery, on the theory, that there is an impediment, or clogging of some portion of the brain. It was probably blood clot, which was suddenly absorbed, or sluiced, leaving the brain clear, active, and in its normal condition.

Mr. Abernethy mentions a Frenchman who spent most of his life in England, and who for many years had lost the habit of speaking French, but while suffering from an injury to the head, again spoke only in his native tongue with readiness and fluency.

An inmate of St. Thomas's Hospital, in a state of stupor, in consequence of an injury to the head, on recovering his speech, spoke only a language that none of the attendants could understand.

The attending physician discovered it to be Welsh, which he had not spoken before in thirty years. On regaining perfect recovery he was unable to speak Welsh, and again spoke English.

Dr. Pritchard, mentions a lady, who when in a state of delirium, spoke only a language which none of those around her could understand, which also was discovered to be Welsh. None of her friends could form any conception of the way in which she had learned this language, but after much inquiry, it was discovered, that in

her childhood, she had a Welsh nurse. She had never been known to speak it since her early childhood, till this attack of fever.

A German lady, married to an Englishman, and for many years accustomed to speaking English, during a certain illness, was unable to speak except in German, which her English attendants could not understand, only as her husband acted as interpreter.

A woman, a native of the Highlands, Scotland, accustomed only to speaking English, suffered an attack of apoplexy. When she was so far recovered as to look around her, with an appearance of intelligence, the doctor could not make her comprehend anything he said to her, or answer the most simple question. He then desired one of her friends to address her in Gaelic, and she immediately answered.

Dr. Rush cites a case of a yellow fever patient in New York, who in the beginning of his illness spoke English, in the middle French, and on the day of his death only Italian.

A Lutheran clergyman informed Dr. Rush, that a number of Germans and Swedes in his congregation when approaching death, always prayed in their native languages, although some of them he was confident had not spoken these languages for fifty or sixty years.

Abercrombie relates a case of a boy, who at the age of four years, received a fracture of the skull, for which he was trepanned. He was trephined at the time, and after his recovery, retained no recollection of the accident or the operation. At the age of 15, when suffering from a delirium of fever, he gave his mother a correct description of the operation, persons who were present at it with the doctors, and other minute particulars. He had never been known to allude to it before, and no means were known by which he could have acquired a knowledge of the circumstances.

An eminent medical friend informs me, that during a delirium of fever, he on occasion repeated long passages

of Homer, which he could not do when in health. Another friend mentioned to me that in a similar situation there were presented to his mind, in a most vivid manner, the circumstances of a journey in the Highlands, which he had performed long before, including many minute particulars, which he had long ago forgotten.

A surgeon riding home from a visit to a patient, was thrown from his horse, and carried into a house in a state of insensibility. Consciousness soon returned. He described the accident distinctly, and gave minute directions in regard to his own treatment, one part of which was to be bled. He conversed sensibly and correctly with the medical man who visited him in the evening, was bled, returned to his own house, his medical friend taking him home in a carriage. As they drew near home, the medical friend made some observations respecting precautions to be taken, with regard to preventing unnecessary alarm to the wife and family of the patient, when to his astonishment, he found that the patient had lost all idea of having a wife or children. This condition continued during the following day, and it was only on the third day, after repeated bleedings, that the circumstances of his past life began to recur to his mind.

On the other hand, remarkable instances occur of the permanency made upon the mind, previous to such injuries, though the mental faculties are entirely obscured, to all subsequent impressions.

Dr. Connolly cites a case of a young clergyman, who when on the point of being married, suffered from an injury on the head, by which intelligence was entirely and permanently deranged. He lived in this condition to the age of eighty, and to the last talked of nothing but his approaching wedding, expressing impatience for the arrival of the happy day.

A very dear friend of mine, on recovering from a long and severe illness, could recollect vividly and with indescribable satisfaction many events of her childhood

life while visiting at the old homestead of her grandfather. She seemed to appreciate this, even more vividly, than the realities of her vigorous and buoyant youth.

It is chiefly in connection with attacks of an apoplectic nature that we meet with similar examples of loss of memory on particular topics, or extending only to a particular period. One of the most common is the loss of memory of words or of names, while the patient retains a correct idea of things and persons.

A patient of Dr. Gregory, after recovering from an apoplectic attack, could state correctly her ideas of things, but could not name them. In giving directions regarding family matters she was quite distinct, as to what she wished, but could make herself understood only by going through the house, and pointing to the various articles. A singular modification of this condition has come under my direct observation. A gentleman could not be made to understand the name of an object, if it was spoken to him, but understood perfectly if it was written for him.

Another frequent modification consists in putting one name for another, but always using words in the same sense.

One patient mentioned by Dr. Abercrombie, uniformly calls his snuff-box a hogshead. The reason assigned for that, was, that in the early part of his life he had been in Virginia, in the tobacco trade, so that the transition from snuff to tobacco, and tobacco to the hogsheads in which it was packed, seemed to be natural.

Another gentleman affected in a similar manner, when he wanted coals to put on his fire, always called for paper, and when he wanted paper, called for coals, and these words he always used in the same manner. In other cases, the patient seemed to invent names, using words which to a stranger were quite unintelligible, but he always used them in the same sense, so that his immediate attendants came to know what he meant by them.

A young lady suffered from a shock caused by the

falling of a gallery of a church. She escaped without injury, but without a recollection of the circumstances of the accident, and this extended, not only to the accident, but to everything that had happened to her for a certain time before going to church.

A gentleman mentioned by Dr. Beattie, who after a blow on the head, lost his knowledge of Greek but did not appear to have lost anything else.

A few years ago, I had a patient, so hallucinated with the idea that he was under police espionage, that he could neither eat nor sleep. He said that there were detectives on every corner watching to arrest or give evidence against him.

My efforts to convince him that this was only an impression on his mind, and not a reality, proved futile, until I took him in my carriage, drove over to the 20th Precinct station house, introduced him to Captain Washburn, and asked him if he knew the man, to which he replied, he did not. I said, "Captain, are you sure you have not detectives watching him? Are you sure that he is a good man? and that he does not require watching? If so I want you to re-assure him of the fact," which he did. This interview with the captain dispelled this hallucination. The patient slowly recovered by careful attention to diet and a few medicinal remedies for building up the brain and nerve power.

In a work entitled "Duality of Mind," the author relates a case of an intelligent, amiable man, who had the power of placing before him, at will, his own image. He often laughed at this Eidolon, which also seemed to laugh at him. This was for some time a diversion, but the result was deplorable. This other self discussed obstinately with him, and to his great disgust often worsted him in the argument. At length, wearied with *ennui*, he resolved not to enter upon another year. He arranged all his affairs, with the utmost method, awaited, pistol in hand, the night of the 31st of December, and when the clock struck midnight, shot himself.

Doubtless all present are familiar with the historical legend of Constantine: "*Hoc Signum Victus.*" This is one of the myths of our religion, and they are numerous all along the line of Christian literature.

To illustrate this, we will cite Lord Herbert, who in writing his book on the "Falsity of Revealed Religion," devoted to it every spare moment he could snatch from business. In doubt as to its publication, he on one occasion prayed audibly for a sign to guide his decision, with regard to publishing it, and affirms that he had no sooner concluded his prayer than he heard a loud but agreeable sound in the heavens, proceeding from a clear sky. This gave him great joy, believing as he did, that this was the sign he craved, approving of its publication. It may be remarked that the work in question was against, rather than favorable, to Christianity.

Semiramis saw everywhere the pale specter of Ninas, and Brutus was haunted by the apparition of his familiar friend Cæsar.

As everyone will recollect, Brutus, at the Ides of March, surrounded by darkness and solitude, seeing vividly an apparition which he addressed, demanded an explanation of her intrusion upon his solitude, to which she replied, "I am thy evil genius. I will meet thee again at Phillipi," where Brutus met his death.

In this apparition there is no reason to believe that the eye was imposed upon. The impression might have been made upon the brain, independent of the organ of vision.

Hatch cites a case of a young woman of 24, who could neither read nor write, who while suffering from nervous fever, talked fluently, in Latin, Greek and Hebrew, in pompous tones.

The priests and monks who visited her said she was suffering from demoniacal possession, and that the devil spoke through her. This possession was rendered more probable, as she had been a heretic.

A young physician visited her, wrote down hundreds of pages of her ravings, which were found to consist of

sentences, coherent and intelligible, each by itself, but with little or no connection with each other. All trick or conspiracy in this case was out of the question. The young doctor traced back all her former life, and found that when she was about nine years of age, she was the ward of a Protestant clergyman, who had been in the habit, for years, of walking through the library and halls of his house, reading and reciting in a loud tone.

A great many inventors and men of genius perform their most wonderful exploits when on the verge of madness.

Dr. Rush says, talent for eloquence, poetry, music and painting, and uncommon ingenuity in several of the mechanical arts, are found involved in this mental condition.

He describes a female patient, who while suffering from puerperal insanity, sung hymns and songs of her own composition during the latter part of her illness, with a tone of voice so soft and pleasant that he lingered and listened with delight, every time that he visited her. She had never discovered a talent for poetry, or music, in any previous part of her life.

It is a well-known fact that Edgar Allen Poe wrote "The Raven" while he was delirious.

Dr. Beasly says we observe in mad people an unsuspected resuscitation of knowledge, hence we hear them describe past events and hear them speak in ancient and modern languages, or repeat long and interesting passages from books, none of which we are sure they were capable of recollecting in their natural and healthy state of mind.

A young man, says Archbishop Bordeaux, was in the habit of getting up in the night, in a state of somnambulism, going into his study, taking pen, ink and paper, and composing and writing sermons. When he had finished one page of the paper on which he was writing, he would read it over aloud and correct it.

In order to ascertain whether the somnambulist made

use of his eyes, the archbishop held a piece of pasteboard under his chin, to prevent him seeing the paper upon which he was writing, but he continued to write on without being incommoded in the slightest degree. The paper upon which he was writing was taken away and another placed before him, but he immediately perceived the change.

He wrote pieces of music while in this state, in the same manner, with his eyes closed. The words he placed underneath the music. It happened upon one occasion that the words written by him were in too large a character, and did not stand exactly under the corresponding notes, he soon perceived the error, erased the part, and wrote it over with great exactness.

Gassendi tells us of a man, who used to rise and dress himself in his sleep, go to the cellar, and draw wine from a cask, while in a somnambulistic state. He appeared to see as well in the dark as on a clear day, but when he awoke, either in the cellar or in the street, he was obliged to grope or feel his way back to his bed.

When spoken to while in this state, he always answered as if he was awake, but in the morning recollected nothing that had happened.

Gassendi mentions a countryman of his who passed on streets over frozen torrents, in the night, but on awaking dared not return before daylight, or before the water had subsided. Somnambulism is believed to be hereditary.

Some time before the Revolution, in the northwestern part of North Carolina, in what is now known as Ashville, there lived a family by the name of Porter. The head of the family one day was called away from home on business, and remained longer than was expected.

The wife, in her anxiety for her husband's safe return (for the surrounding country was infested with hostile Indians), kept a sharp lookout from day to day, and, much to her joy, saw the well-known horse and rider coming into

the yard. She waited a long time for him, and becoming uneasy, went to the stable. Much to her horror, she found neither horse nor rider. Then she retraced her steps, expecting at least to find traces of the foot-prints of the horse. But she was doomed to disappointment. Becoming alarmed she aroused her neighbors, and they instituted a search for him. He was found in the woods, having been murdered by the Indians at the time she had supposed he had driven into the yard of his home.

Abercrombie, in his chapter on Spectral Visions, cites a case of Dr. Gregory's, in which the patient saw an old woman in a red cloak, who seemed to come up to him and strike him with her crutch on the head, at which he fell down in an apoplectic fit. This particular vision was noticed in each successive attack.

Dr. Ferrier mentions a case of a man who, while in a state of mental excitement, while awake, for several months was haunted constantly by figures of men, women, animals and birds.

Dr. Albertson mentions a saloonkeeper who saw a soldier endeavoring to force himself into a house in a threatening manner. When, on pushing forward to prevent him, he was astonished to find it a phantom. He had also a succession of visions of persons long dead, and of others who were living. He says: "I have known a patient describe distinctly a dance of fairies, on the floor of the apartment, and give most minute account of their figures and dresses."

A writer in the *Christian Observer* mentions a lady who, during a severe illness, repeatedly saw her father, who resided at a distance of many hundreds of miles, come to her bedside and, drawing the curtain aside, address her, in his usual voice and manner.

A medical friend relates a case of a relative of his own, a lady 50, who, on retiring one evening from a party, went into a dark room to lay aside some part of her clothing, when she saw distinctly before her the figure of death, as a skeleton, with its arm uplifted, with a dart

in its hand. It instantly aimed a blow at her with the dart, which seemed to strike her on the left side. That same night she was seized with a fever, accompanied by symptoms of inflammation in the left side, but recovered after a severe illness. So strongly was the vision impressed upon her mind that even for some time after her recovery, she could never pass the room where she saw the vision without becoming agitated.

Trains of thought bring up images to the mind which appear as real visions.

Dr. Gregory says of his father, who having gone to bed with a vessel of hot water at his feet, dreamed that he was walking on the crater of Mount Ætna, feeling the ground warm under him.

He had visited Mount Vesuvius and had actually felt a sense of warmth when walking near the crater. It was strange the dream was not of Vesuvius instead of Ætna, of which he had only a description.

There are many cases which show the mind to be active while the body is asleep. Also that certain bodily functions may be dormant while others are alert.

The faculty of locomotion may be in exercise while the senses are in slumber, as is indicated by soldiers sleeping while on their march.

It is abundantly evident that the spirit is not only awake during sleep of the body, but that it is constantly on the alert, and that it has a certain supervision over the body, so that it rouses into consciousness whenever it becomes necessary for so doing. A physician will not heed the cry from a child which instantly arouses the mother, but the slightest sound of his night-bell will rouse him. He may get up, go out and return without his wife being aware of it.

When we fix a determination in the mind to awaken at a certain time the mind wills it and we awake, while if we trust another to waken us the mind relaxes its vigilance and fails to rouse the body. It is not on the alert for measuring time nor listening to sound. An alarm

clock will awaken a person while louder noises in the street will be passed by unheeded. Anyone unaccustomed to having another enter his room after his retiring will usually be awakened by his approach, however silent it may be.

Every phenomenon connected with the human constitution goes to show that man is a two-fold being, possessing an outward and an inward consciousness. The simplest and most common form of this is the ordinary sleep and the usual wakefulness. Between these two conditions he continually alternates and derives his rest, not from the state of unconsciousness, but by changing his conscious actions from one plane to another. His alternations of these forces, therefore, between the correlative planes of the outer and inner life, is to the human constitution what day and night, summer and winter are to the planetary system.

A man may be thinking or reading in a perfectly lucid, conscious manner, but on closing his eyes his mind immediately reverts to other scenes and thoughts, and many times with more activity than in his wide-awake moments.

Dr. Read relates of himself, that after a blister on his head, having become irritated, causing pain, he dreamed of falling into the hands of savages and being scalped by them.

Every event must have a cause adequate to the result. Appearances showing a correct application of means to an end, indicate design and intelligence in the cause.

Dr. Abercombie says, by memory we retain the impression of facts and events. With recollection we recall them into the mind, by voluntary effort. By conception we recall portions of the impressions of casual scenes, persons or transactions; thus, a skillful painter can delineate from conception a landscape considerable time after he has seen it, or the countenance of a friend who is dead or absent.

These appear to be the leading phenomena which are referable to the head of memory. There seem to be

original differences in the power of memory, some individuals being remarkable for retaining memory, though not otherwise distinguished by their intellectual endowments. Thus persons have been known to repeat a long discourse after hearing it once, or even a series of things, without connection, as a long column of figures, or a number of words without meaning.

There is a man on record, who could repeat the whole contents of a newspaper, and of another who could retain words that were dictated to him, without any connection, to the amount of 6,000.

A man mentioned by Seneca, after hearing a poet read a new poem, claimed it for his own, and in pursuance of this claim, repeated the poem from beginning to end, which the author himself could not do.

A similar anecdote is told of an Englishman whom the King of Prussia placed behind a screen, when Voltaire came to read him a new poem of considerable length. The king derided him on claiming the authorship of the poem, and soon called the Englishman, who had overheard the reading of it, who repeated it word for word.

But these prodigies of memory do not manifest other intellectual powers to correspond. Though the mere memory of words may be met with in a high degree in persons of a defective understanding, it is true also that men of high endowments have to be remarkable for memory.

I have written something more on the effect of visions and dreams on peoples and nations as well as individuals, but I will not detain you further than to say that there is a universal law underlying all these phenomena. "There is a sufficient cause for every effect." Now if noting and tabulating these various mental phenomena will enable anthropological students to comprehend and understand this law, the objects of this paper will have been attained.

It is said that Themistocles could call the names of all the men of Athens, amounting to twenty-thousand,

and that Cyrus knew the name of every man in his army.

It is reported that the late Dr. Lyden was remarkable for his memory. It is said that he could repeat correctly a long Act of Parliament, or any simular document, after once having read it.

When a friend congratulated him on his remarkable power in this respect, he replied, that it was often a source of great inconvenience, as well as an advantage. This he explained by saying that when he wished to recollect a particular point in anything, which he had read, he could do it only by repeating to himself the whole, until he reached the point which he wished to recollect.

I cannot conclude this paper without alluding from an anthropological stand-point, to the wonderful influence that visions and dreams have had upon our race.

The establishment of religious creeds and dogmas of all nations have had for their origin and foundation the belief in these unsubstantial vagaries. Even the divine Plato was a believer in visions and dreams.

Dreams and visions comprise an important part of the sacred scriptures. All inspired writers seem to have been impressed with the importance of these evidences of spirit manifestations. The Pentateuch, the Prophets, the Apostles, all dwell with minuteness of detail upon this phase of evidence of supernatural inspiration. Even the evidence of the dogmas of faith in the Christian religion largely rest on Mary's vision, and Joseph's dream.

The Buddhists' faith is also visionary, but much more ancient and direct. In the Oriental faith, Buddha sustains the same relation to Brahma that Christ does to God. Correlatively, the Buddhists are the Christians, and the Brahmins are the Jews of great antiquity.

The legend of the Buddhistic writers (of a time 600 to 1,000 years before the Christian Era), as inscribed on the tablets and temples in India, is that Mai, a Virgin of the ancestral line, having been impregnated by a ray of light from Deity, in due time gave birth to Gantama

Buddha, who, by his deific parentage, became endowed with superhuman talents and powers.

He was enabled to heal the sick, cast out evil spirits, and even to raise the dead, and by special aid and dispensation from Brahma, the Father God, was enabled to struggle against and to destroy the Giant of Evil, for which he was surnamed Christna.

The legend then recounts many wonders, miracles and prodigies, accomplished by him, and finally closes with the assertion that he died a martyr for the peace of mankind on earth.

The ancient faiths place Buddha synonymous with Vishnu, as the second person in the Brahminical trinity, Brahma Vishnu, Siva Vishnu being the incarnation of Brahma, which the sacred books of the Hindoos declare will be reincarnated in seven separate atavors or manifestations to mankind.

URANISM AND PÆDERASTY.*

By Dimitry Stefanowsky, Jaroslawl, Russia,

Assistant Imperial Prosecutor.

MOST authors who have discussed sexual inversion, have distinguished between innate and acquired pæderasty. There has also long been established the distinction between the active and passive type. After establishment of these types they have been clinically neglected, probably because in them was seen only two almost identical methods of acquisition and expression of the same pathological tendency. Möll's† excellent work contains a wealth of observations and critically judicial remarks, the final conclusion from which, is that all sexual inversion is, in essence, passive, and must be regarded as innate. The truth lies between this opinion and that expressed by previous authors: Casper, Westphal, Magnan, Chevalier, Krafft-Ebing, etc. The question hence requires psychological analysis. When the subject believes himself to be a female, face to face with another man, when he desires to be caressed, embraced, possessed by the latter, when he adores in this last, the male in all his splendor of virility, then the alienist has to do with a perversion, which belonging to a special category, should receive a special designation in the interest of scientific precision. It could appropriately be named uranism, as was suggested by the famous Hanoverian assessor Karl Ulrichs, who has expressed the essence of uranism in the phrase female soul in a male body.

The persons afflicted with uranism are called urnings. They are rarely addicted to passive pæderasty and almost never to active, as in many instances impotence has been

* Original Contribution, translated by J. G. Kiernan, M. D., Chicago, Ill.

† "Die Contrare Sexualemfindung," Berlin, 1893; "Les Perversions de l'Instinct Genitale," Paris, 1893.

produced by excessive masturbation. According to their manifestations of inversion they are divisible into two types. The *platonics* or *erotomaniacs* who are contented with an ideal respectful love accompanied with erotic rumination (Binet). The second type, the *fellators*, replace the vaginal cavity to them wanting by the buccal. According to Laurent the title of these last in the prisons of Paris, is "butter-merchant." Luys* has described several types, above all the case of a young Jew whose picture is taken from the life. "In the daily satisfaction of his shameful passion, his lips were hyperæsthetic and the pleasure, whose extinguishment among his victims he aided, he asserted, the intensity of the orgasm provoked far surpassed the intoxication of normal sensuality. He envied in his sensual desires the low prostitutes, who in blind alleys and retired places throw themselves at the feet of debauchees for the same purpose. These women he supplicated, gold in hand, to allow him to replace them in their revolting function.

Fellatorism cannot be explained without invoking another pathological state, passivism.† It appears in effect that all fellators are but interverted passivists, volupty in whom consists in receiving humiliations and injuries on the side of their lovers. Möll's work reports the case of a fellator who composed a regulation of twenty paragraphs for his lover, who had to maltreat him systematically. Paragraph 14 is so abominable‡ that it can be given only in Latin.

Denudes te ipsum sumque Denude collocas te in ventram alterque pedes tuos in lingua lambere debet, præcipue interdigitos et plantane longum tempus. Si erectionem habet, decumbis es modo ut alter una manu membrane tuum alterque testiculos tuos fringiat; eadem tempore nates tuos lambere debet linguamque immittere in anum tam profunde quam potest que ad ejaculationem semini nates.

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* "Les Fellateurs," Paris, 1888.

† See article on this subject by author, ALIENIST AND NEUROLOGIST, 1893.

‡ Op. Cit., page 143.

Active pæderasts, the only true pæderasts, are attracted by immature youths (*gytons*)* of feminine aspect. These pæderasts comport themselves as males; their volupty remains always virile, since relations with females are frequent with them. Such relations are impossible to "urnings," as they experience toward women an intense "trade rivalry," which often attains the extreme degree of the "woman hater." Preference of pæderasts for *anal coitus* is easily explained by pathological association, established between the idea of such a joyance and volupty, such as occurs in many cases of erotic fetichism,† as in the adoration of table-cloths, chemises, drawers, night-caps, etc. A similar association conceived during childhood, re-enforced by masturbation and erotic rumination, may with time become indissoluble and indestructible.

In conclusion, I shall present in systematic tabular form the differences between these two principal forms of inversion, pæderasty and uranism:

PÆDERASTY.	URANISM.
1. Is more often acquired than innate. Appears late, sometimes only in senility.	1. Is absolutely innate and manifested in youth.
2. The lust manner of acting and feeling is masculine and often co-exists with normal coitus.	2. The lust manner of feeling and acting is feminine, and is accompanied with envy and hatred of women.
3. The appearance is musculine. The tastes and habits are virile.	3. The external aspect is feminine, as are the tastes, habits and dress tendencies.
4. The subject is attracted to boys of feminine aspects (*gitons*).	4. The subject adores well-built virile men.
5. The penchant is purely material and gross, and consists in assuagement of lust by anal coitus.	5. The penchant is often pure, ideal, disinterested. Anal coitus is rare; masturbation, especially buccal, occurs.
6. Pæderasty is often sadistic, as in the cases of Nero, Giles de Retz, Marquis de Sade, the German artist Zastrow, and many others.	6. Uranism is almost always accompanied by a more or less pronounced passivistic state.

* See "The Satyricon."

† ALIENIST AND NEUROLOGIST, 1891.

7. Pæderasty is often a vice, sometimes a disease. It may be an expression of mental disorder, senile dementia, paretic dementia, epilepsy, etc.

8. Pæderasty may sometimes be restrained or repressed by the will. It possibly may be cured by treatment suited to the case, by bromides, etc., hypnotic suggestion, etc.

9. Pæderasty, as a vice or a profession, should be suppressed or punished by the law.

7. Uranism is always a disease or an inversion. It is sometimes a symptom of degeneracy. It may be caused by disorders during embryonic life.

8. Uranism is absolutely outside the sphere of the will. Cure would appear impossible if there be not complete exhaustion of all volupty by continued use of anaphrodisiacs.

9. Uranism as an innate moral deformity should never be pursued or punished by law.

Psychiatry and Brain Localization.

By Arthur E. Mink, M. D., St. Louis, Mo.

FEW subjects in medical science have been more unsatisfactory than the pathological anatomy of insanity. In only from thirty to forty per cent. of the insane, can palpable pathological changes be found in the brain; and these principally in the later stages of mental disease. Esquirol says in his "Maladies Mentales:"

> I would gladly have written on the pathological cause of insanity thirty years ago. Now I would not attempt so difficult a task. So much of uncertainty and contradiction is there in the results of *post-mortems* made upon the insane to-day.

This was written over fifty years ago, but it is still true. We do not propose to discuss the pathological anatomy in detail; but only wish to point out that neither the pathologico-anatomical nor the clinical methods are able to explain at present, that relation between derangement of psychical function and its anatomical substratum, which is the particular business of psychiatry.

When we consider that the histology and chemistry of the cerebral cortex, are still largely unexplored, and when we stop to think that even the manifestations of morbid mental phenomena must depend on exaltation, depression or destruction of cortical cell function, we can then appreciate the delicate character of certain lesions, upon whose very fineness certain psychoses depend for their manifestation.

If poisons, like opium, conium, strychnine, etc., and diseases like hydrophobia, tetanus and others, can produce brain disturbance sufficient to cause death and yet leave no *post-mortem* trace behind, why should not those much more delicate changes in many cases of insanity be wiped away at death?

Much has been and will be accomplished by this branch of pathological anatomy, but we wish to observe that psychiatry must avail itself not only of the anatomical and clinical methods, but also of the facts and doctrines of modern cortical physiology, and experimental psychology, in order to explain the complexities of psychopathic phenomena. In our opinion the doctrines of cortical localization bear the same relation to brain diseases as auscultation and percussion do, to diseases of chest.

In Germany, masters like Meynert, Westphal and Wernicke and others have been pioneers in this direction. Wernicke, in a memoir (Ueber den wiſſenſchaftlichen Standpunkt in der Pſychiatrie, 1880), published fourteen years ago, pointed out the far-reaching results of modern cortical physiology in psychiatry, and with great acumen made an attempt to apply them. Psychiatry has long been enveloped by an atmosphere of metaphysical psychology from which it must be freed in order to make any scientific advance.

Many mental phenomena, which were formerly relegated to the domain of metaphysics, have now received their explanation from modern cortical physiology or experimental psychology, and much more will be accomplished in this direction.

For our purpose it will be sufficient to define insanity, with Krafft-Ebing, as a diffuse disease of the cerebral cortex, involving anything from nutritive up to formative changes, including those of inflammation and degeneration, which is characterized objectively by the predominance of morbid psychical phenomena. Meynert expresses the same idea, in a somewhat different way, by saying that insanity was a chapter in diseases of the fore-brain. I propose, in applying the doctrine of cerebral localization in explanation of mental disease to take paretic dementia as an example.

This disease is what Kahlbaum would call a total psychosis or vesania typica, and its course may run

through various phases, each of which may be characteristic of other types of insanity such as mania, melancholia, dementia, etc. Anatomically, we may characterize this disease as a periencephalo-meningitis diffusa and, as its pathological anatomy is perhaps the best known of any mental disease, it will be of peculiar aid in the elucidation of psychical symptoms. The exaggerated feeling of well-being in the earlier stages of paretic dementia, we must attribute to general excitation of all the cortical areas, caused principally by hyperæmia, due to more or less vasomotor paresis.

Hughlings-Jackson has shown us that in the dissolution of the nervous system, the last acquired and most complicated faculties are the first to become disturbed, and this is precisely what we observe in paretic dementia. The moral and imaginative faculties, memory and logic, become early disturbed and are "signal" symptoms in showing us the beginning of diffuse disease of the cortex.

The disturbance of motor co-ordination, which soon follows in the train of symptoms, show us again that the most complicated and last acquired muscular adjustments are the first to become affected. The finer motor co-ordinations necessary for speech, and the complicated ones of artisans, musicians, etc., become affected, and are due to beginning disease of the motor area, including the third frontal convolution and island of Reil. The consideration of the vascular supply of the brain will be of value to us in explaining why these symptoms are the first to occur. We know that the pre-cerebral and medi-cerebral arteries supply the largest cortical areas of the brain. These two arteries are branches of the internal carotid, and their blood supply comes more direct from the heart, and the blood-pressure is greater in them. The vasomotor areas of these vessels are the largest and functionally the most active of the brain and consequently in physiological, and more especially pathological hyperæmia, they are the first to become affected. Now

autopsies made by competent observers, have shown that it is precisely the areas supplied by these vessels which are most involved in paretic dementia. If the patient have any hypochondriacal delusions, complaints of fulness and pain in the head, etc., which are results of cerebral fluxion, they begin to disappear about this time and their place taken by delusions of grandeur and extravagant plans and expenditures, which are merely the outcome of such unsystematized delusion.

Owing to the disease gradually involving the cortical elements and their association tracts in the frontal area, the logical powers are deranged. This, combined with irritation of the motor area, gives a subjective sense of muscular power. There is also irritation of the tactile areas, which, according to Munk are co-extensive with the motor region.

Now the idea of our personal indentity is dependent upon the union of all the sensory impressions derived from our body proper. The exaltation of these, combined with a weakened logic, unable to correct, but only further mislead, give rise to delusions of grandeur. Upon such a basis of false premises a defective logic can build a complex superstructure of extravagant air castles. Disturbance of the coarser motor adjustments soon follows, owing to extension of the disease-process in the motor area.

Lubimoff, Schuele and Spitzka, have pointed out the importance of vasomotor disturbances in this disease. We believe them due to the fact, that the cortical vasomotor centers have become involved. Hence the monocrotic pulse. We have often also unilateral or bilateral hyperæmia in the domain of the cervical sympathetic. The vertiginous and apoplectic attacks, local or general rise of temperature, unilateral hyperidrosis and circumscribed cutaneous hyperæmia, all belong in the same category.

In the later stages we may have neuro-paralytic hyperæmia of the lungs, bladder, intestines, etc., along with cyanosis, coldness and œdema of the extremities.

The fact that many of these vasomotor disturbances occur in many other cases of cortical and sub-cortical lesions is instructive. The hallucinations and illusions which occur in paretic dementia are very instructive. Auditory hallucinations are most prominent, which is explained by the fact before emphasized, that the area supplied by the pre- and medi-cerebral are most involved by the disease, and the first tempero-sphenoidal convolution is supplied by a branch of the medi-cerebral.

We may have hallucinations of disgusting odors, due to lesion of the uncinate gyrus, or of taste due to implication of the gustatory center. Hallucination of sight may occur if the occipital cortex be involved, and we may have tactile and visceral illusions and hallucinations due to disease of the cortical, tactile and visceral areas.

After or mingled with these phenomena of excitation or perversion, are those of depression and destruction, owing to the fact that certain cortical areas are irritated and others depressed or destroyed. Both kinds of symptoms are mixed together and so present that complex symptom-picture known as paretic dementia. This taken in connection with the fact that subcortical and spinal tracts become involved in the disease, will explain to us many symptoms otherwise incomprehensible.

Word-blindness, or word-deafness, may occur, from destroying lesion of the occipital or tempero-sphenoidal cortex. Hemianopsia can occur from destruction of the visual area.

The miscellaneous collection of paræsthesias, anæsthesias and hyperæsthesias, of analgesias and hyperalgesias, are due to affection of cortical and subcortical areas.

The maniacal, epileptiform and apoplectiform episodes of paretic dementia are highly important symptoms.

When we consider the cortical vasomotors are in a state of paresis, and the cortical elements in a condition of unstable equilibrium, from hypernutrition, and

ready for nervous discharge from the slighest stimulus, we can see how only the slightest excitus may be sufficient to produce a nervous discharge, extending over vast areas of the cortex, and so give rise to these episodes. In cases where the cortical neuroparalytic hyperæmia is especially great and the nervous discharge severe, consciousness may be temporarily abolished, which, along with convulsions, characterize some apoplectiform episodes. In the epileptiform episodes the convulsions may be unilateral or bilateral, or instead we may have a state similar to the "psychical equivalent" of epilepsy, which indicates a severe nerve discharge of the frontal cortex. The maniacal episodes are due to general nervous discharge of almost the whole cortex, but more especially of the anterior portion.

That such attacks as these can only hasten the end is self-evident. There is but little doubt of the existence of cortical pupillary centers, and the pupillary disturbances of paretic dementia seem to be primarily caused by diffuse cortical disease.

We can lay it down as a rule that anything which excites the functions of the cortex of either or both hemispheres will cause unilateral or bilateral myosis, and anything which depresses or destroys the functions of the cortex, will cause unilateral or bilateral mydriasis. What we observe in this disease proves this, as myosis is more common in the earlier or irritative stages, while mydriasis is more common in the later or stage of destructive lesion. Intermediate between these two is a shifting mixture of myosis or mydriasis, according as the nervous discharge is greater in one or the other hemisphere. We have often the Argyll-Robertson pupil in cases with posterior spinal sclerosis.

The disturbances of temperature which often occur in paretic dementia point to lesions affecting the cortical thermotaxic centers, which Eulenburg and Landois and others have found in the Rolandic region.

The terminal dementia of a paretic can be consid-

ered as the outcome of the sum total of all of the destroying lesions of the cerebral cortex.

We have dealt in this article with paretic dementia as diffuse disease of the cerebral cortex, accompanied by a morbid psyche. We have mostly refrained from considering those types where spinal lesions precede or complicate the disorder. We wish to point out that the sclerosis found in the cortex in paretic dementia is no process *sui generis*, but can be cortical, subcortical or spinal, and may produce various disease types according to its seat. We have proof of this in the fact that in the so-called "ascending" type of the disease we may have first symptoms of posterior, lateral or disseminated spinal sclerosis, but it is only when the cortex becomes involved that psychical symptoms occur.

A Case of Myxœdema Successfully Treated by Thyroid Gland.*

By John Harold, M. R. C. S., L. R. C. P., Lond.,

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A MAN fifty-one years of age was admitted into Charing-cross Hospital suffering from myxœdema. There was no history of antecedent depressing influences; there were no hardships, no worry, no injury. He was of temperate habits. The onset of the disease was gradual. He noticed that he was getting stouter, that he was clumsy in handling objects, that his feet were often cold, and that for three or four years he was becoming weaker, and thus unable to follow his employment, which entailed hard work. For many years he had suffered from chilblains, and for three to four years his friends had noticed the marked alteration in his face and in his general aspect. On coming under observation he presented the appearance characteristic of an advanced case of myxœdema. The face was swollen throughout and expressionless, and the eyebrows were very thin and somewhat curiously arched. The nostrils were wide, the nose was flattened, and the alæ nasi were thickened, with obliteration of the naso-labial fold. The hair of the scalp was exceedingly thin and dry, and in many parts the scalp was quite bald. The tongue was enlarged and its movements were slow; the teeth were loose, especially the molars; the gums were spongy and receding, and the lips much increased in size. His skin was of a sallow tint, thickened, harsh and dry, with an absence of sebaceous secretion. There was an entire absence of hair in the axillæ and in the pubic region. Both hands and feet were sensibly enlarged, but not spade-like in

* Abstracted from the *Lancet*, Aug. 25th, 1894.

appearance; the nails were brittle and grooved and their nutrition was manifestly defective. There was an absence of skin lesions. His voice was husky, slowness of thought, of speech, and of movement were pronounced, and he appeared to take but little interest in what was going on around him. Awkwardness of gait, with associated inco-ordination of movement, was readily perceived. The speech was accurate, but slow and thick; vision was normal, but somewhat interfered with, owing to the swelling of the eyelids; there was no proptosis. A peculiar bitter taste and disagreeable odors were more or less constant troubles. The thyroid gland could not be detected, and there were no correlated tumefactions in the supra-clavicular regions. He was very sensitive to cold, and had no difficulty in swallowing. He was good-tempered and had no illusions or hallucinations. Nothing abnormal was detected in the lungs, heart, or abdominal viscera. The urine was pale in color, non-albuminous and non-saccharine. The pulse was slow and weak. The average temperature of 104 observations—97.8° F. The entire body was swollen and did not pit on pressure.

The treatment first adopted was the subcutaneous injection of a glycerine extract of the thyroid gland into the soft tissues of the back. No improvement following the injections, which were painful and caused abscesses, they were discontinued, and when the abscesses had healed the oral administration of the thyroid gland in the form of tabloids was commenced. One to three tabloids (five grains of the dried gland in each) were given daily, the patient being kept in bed throughout the treatment and watch kept for any untoward effects. The tabloid form of administering the thyroid was selected as being reliable and more efficient than some of the powders and glycerine extracts of the gland. Improvement in the condition of the patient was soon manifested. His general appearance underwent a marked change; the abnormal myxœdematous infiltration of the tissues gradually disappeared, his features became

unmasked; the skin became soft, less wax-like, and recovered its functions, perspiration of the hands being noted early; there was general desquamation, especially on the hands and feet, and the patient was brighter looking and generally more cheerful. There was a notable loss in weight. He no longer complained of cold or of the symptoms referable to the special senses already alluded to. An abundant growth of fine downy hair on the scalp was evident. The patient frequently mentioned the fact that he felt a peculiar tickling sensation in his throat, and, curiously, he located the site of this trouble over the situation of the thyroid gland. A peculiar mottling of the skin developed on the forehead. The urine became more abundant, of a higher color, rich in pigments, and non-albuminous, with a moderately large mucous cloud; the excretion of urea was increased, the phosphoric acid elimination being normal in amount.* The hands regained their normal shape and their movements were much less clumsy. The improvement in the mental faculties kept apace with the marked improvement in all his physical actions. This case illustrates the difference between the effects produced by the subcutaneous and oral methods of administering this potent therapeutic agent. No amelioration of the symptoms followed the subcutaneous method, which was attended by undesirable local effects. It is of great importance to enjoin rest in bed during the course of treatment. The patient is thus kept in hand and any unpleasant effects produced by the remedy are early noted and soon checked. The chief untoward effects to be looked for are neuralgic pains, angina-like seizures, palpitations, depression, giddiness, nausea and headache. Possibly many of these symptoms are referable to an idiosyncrasy on the part of the patient to the thyroid gland or to the dose administered being too large owing to there still being some functional thyroid gland left to carry on in part its internal secretion; or, perhaps, to stored-up waste products

* *Brit. Med. Jour.*, July, 1893, page 217.

elimated into the blood. It is therefore wise, especially if the patient be the subject of any cardiac trouble, to be satisfied with moderate initial doses, noting their effect on the temperature and pulse. This patient was examined on July 16th last to ascertain if there was any recurrence of the myxœdema. He practically had discontinued the use of the tabloids since March, 1893. He informed me that he had not been so well for years and was able to follow his employment without any inconvenience whatever, that his appetite was good, his skin had resumed its former color and now perspired freely, the teeth were no longer loose, and chilly sensations, bitter tastes and unpleasant odors no longer troubled him. His manner was alert, his locomotion rapid, and his speech quite natural, and he boasted of the luxuriant growth of hair on the head. It was therefore manifest that in this case the degree of improvement obtained under the thyroid treatment was maintained.

Continuous General Psychomotor Paresis (in a Male) Without the Other Concomitants of General Paresis.

By C. H. Hughes, M. D., St. Louis.

NEUROLOGISTS may have observed cases of this kind, but no such cases, if noted in the literature, have come under my observation and they have so rarely presented in my own neurological experience (extending however only over the past twenty-five years) that I am persuaded it might prove of interest to others to note what I have observed in this direction. There are conditions of psychomotor center paresis and consequent impairment of motility—motor impulsion and motor transmissibility, which are neither the precursors of dementia paralytica nor the sequences of cerebrasthenia or general neurasthenia.

Some of these cases hitherto diagnosticated by myself as precursors of general paralysis of the insane, have surprised me by going on no further than the incipient motor failure with associate mental inertia and failure of accustomed mental acuteness and alertness in business (the apparent depression stage), and after a somewhat lengthened period of treatment, conjoined with rest and recreation, have still further astonished me by appearing to entirely recover.

The number of such cases has been inconsiderable to be sure, but sufficient to excite our own clinical interest in differential diagnosis. One such case still under observation I now briefly record.

Four years ago, the past spring, a case of peculiar interest, and rather inexplicable to the family physician, Dr. L., was referred to me for treatment. The preliminary examination gave the following conditions: The specific gravity of the patient's urine was 1020, there

being no albumen or sugar, the phosphates varied in quantity, but were usually in excess and the reaction was generally alkaline.

The pulse was sixty-four, recumbent, and about sixty-eight when upright. The patient moved about on his feet, his tongue showed little of interest, his skin was fairly active and the bowels were a little constipated. The patient appeared stuporous, tired and mentally inert. Answered to my interrogations no more than he was obliged to by much urging. His speech was hesitating, slow and drawling—somewhat scanning. He relied upon his wife to conduct conversation for him as in everything else. His pupillary reaction was equal in both eyes, but sluggish, vision was normal so far as we could ascertain. The slowness of the pupillary reflex was only correspondent to that of deglutition, all physical motion and psychical reflex activity. He would get up slowly, sit down and move about with undue, and to him, unnatural deliberation. His mental movements required his own impulsion to be re-inforced by the suggestion and propulsion of others. The vesical and rectal reflexes were tardy, the knee-jerk was indifferently responsive, there was no ankle clonus, the cremasteric reflex was insignificant and the virile reflex was *nil.* He digested poorly, intestinal peristalsis was not active. He had little appetite and no fever and slept six or seven hours out of the twenty-four. His expression was inquiring and solicitous, but he had no melancholia. Dynamometric and æsthesiometric examinations were unsatisfactory because of the patient's hebitude and indifference. He was of slender build, his age was sixty, and as he is now in business we give only one initial of his name, M., that we may in future recall the case, if desired.

Altogether, he had a worn-out appearance, but there was no neuralgia anywhere, no suggestion of cerebral hyperæmia or visceral, neural or special organic disease.

No diathetic conditions were discovered, but there was a suspicion, but not proof, of a previous syphilis. No

foci monoplegias were apparent. No persistent headaches.

The appearance of the patient would impress the alienist at first glance as one of acute dementia or melancholia attonita, but there were no delusions of depression apparent, or delusions of any kind. The patient realized that something was wrong with him, which he did not understand, and assented in a rather passive than active way to the care of his wife and the ministrations of his physician, but there was no appearance of confusional insanity.

Now I could make nothing more nor less out of this symptom-grouping than a condition of psychomotor over-strain or cerebrasthenia or cortex neuratrophia extending itself markedly upon the circum-Rolandic area, and treated him accordingly, with neurotic and hæmic reconstructives, giving him therapeutically the benefit of the doubt as to syphilitic implication of the cerebral centers indicated. He sufficiently recovered after the expiration of about six months' treatment to return to his business, and is now fairly well, though he should in my judgment give up business. His recovery took place much like neurasthenics do; first an improvement, then a relapse, then after a time improvement again without relapse.

There has been no sign of return of his symptoms; there was never any psychical exaltation or grandiose delirium; there have been no epileptic siezures, and no labial trouble, and none of the progressive features, such as characterize true progressive general paralysis of the insane. His age and sex both preclude the suggestion of hysteria, as well as the steadiness of his symptoms.

I think this and similar cases belong to a distinct category, and that it may prove profitable in practice to differentiate them. This record is hastily drawn in the midst of a very busy practice, to elicit further records of observation in this direction.

The patient received quinia freely.

The Origin and Progress of Mental Medicine.

By E. Régis, M. D., Bordeaux.

Historical introduction to a practical Manual of Mental Medicine, by E. Régis, Bordeaux, Feb. 7th, 1894. Authorized translation by H. M. Bannister, A. M., M. D.

HIPPOCRATES, the creator of mental medicine, belonged to a family of priests, the Asclepiades, who claimed descent from Æsculapius, and possessed, as we have seen, the monopoly of the treatment of the insane in ancient Greece.

He was born, as is well-known, in the island of Cos, 460 B. C. Although he wrote no special treatise on mental alienation, it is easy to perceive from an attentive persual of his writings, that he had a tolerably accurate knowledge of this class of disorders. Even before him some distinctions had been made, as he appeared to have borrowed from traditions the terms he employed of *phrenitis*, *mania*, *melancholia* and *sacred disease*.

Hippocrates describes *phrenitis* according to its etymology, together with pleuritis and pneumonia, and locates its seat in the phrenic center. It consists according to him, in a continuous delirium in an acute fever. Its cause is the heating of the whole body by the blood, itself over-heated by mixture with the bile which displaced it and changed it to serum, affected its movement and its habitual constitution. As to the symptoms, they are fully indicated in the following formula, as succinct as accurate, which is taken from the treatise on epidemic affections: "Acute delirium with high fever, carphologia, small and wiry pulse." The disease, the duration of which varied between the extreme limits of three and one hundred and twenty days, ended in death more often than in recovery.

Although it is difficult to say exactly what Hippocrates and other ancient writers understood by *phrenitis*, it is allowable to conjecture that they included under this term the majority of the acute idiopathic or symptomatic insanities, and, in particular, acute febrile delirium.

If the indications relative to phrenitis lack clearness in the Hippocratic writings, this is still more the case in regard to mania. Scientifically the ancient authors, including Hippocrates, considered mania as a violent delirium, either acute or chronic. In the Hippocratic collection we find it generally confounded with phrenitis and melancholia.

Melancholia also lacked any very precise signification. Its two principal characters, according to Hippocrates, seem to have been fear and sadness. The syndrome varied also according to whether the alteration in the brain was due to the phlegm or the bile. If the first, there was no excitement; if the second, this general condition was in different degrees the principal character of the malady.

Besides phrenitis, mania and melancholia, Hippocrates appears to have recognized the insanity of pregnancy and alcoholic insanity. In any case he seems to have observed examples of these.

In the domain of nervous diseases, he possessed some vague notions about hysteria, but it is epilepsy that he was best acquainted with, and which he described with the greatest care. He even remarked the fact that epilepsy might be complicated by insanity.

Hippocrates had not merely the merit of first recognizing the pathological nature of insanity. With the most praiseworthy persistence he combated the medico-religious practices of the Asclepiades in order to substitute for them a more rational and medical treatment. From that time the ablutions, exorcisms and incantations were succeeded by phlebotomy, purgation, emetics, baths, vegetable diet, hygienic exercises, music, traveling, in a word by all the medical appliances available at that epoch. It

was he who regulated the use of hellebore (*Veratrum album*), employed empirically from a very high antiquity as a specfic for insanity, and he had his patients go and collect it themselves at Anticyra, a little village in Thessaly, where was found the variety in most repute. Hippocrates appears to have likewise employed mandragora, as a special drug, in cases of suicidal melancholia.

As to how they managed the insane, whether or not there existed especial establishments for their care, and whether restraint or coercion was employed in severe and difficult cases, we are unfortunately left only to conjecture. It seems probable that quiet and inoffensive patients were left at liberty or, at least, in their homes under the surveillance of their servants or relatives, and that certain cases were cared for in asylums (*ἰάτρια*), as appears to be the case from a passage in Plutarch relative to Antiphon, a physician at Corinth. Moreover, a history of a lunatic related by Herodotus leads us to suppose that very rigorous methods of restraint were employed by the ancients in the treatment of dangerous cases. He says, in fact, that Cleomenes, king of Lacedæmon, having fallen into a frenzy, with violent agitation, his family had him secured by wooden fetters.

Hippocrates by himself alone, as regards the history of insanity, comprises or covers the whole Hippocratic period. His successors, who were only his imitators, added nothing to his medical ideas on insanity, and, at the time of the dismemberment of the empire of Alexander, scientific tradition found itself transported into Egypt, where it assumed a certain brilliancy under the reign of the Ptolemies.

Alexandrian Period.

The Alexandrian period, represented especially by Herophilus and Erasistratus, who lived about three hundred years prior to the Christian era, is, in reality, only an intermediate period between Hippocrates or the

Greek school and Asclepiades and Celsus or the Græco-Roman school.

Lacking documents in regard to this period, its history is very obscure, and we are compelled to seek what we can learn from Galen, the works of Erasistratus and Herophilus not having come down to us. But from what we learn of the scientific knowledge of these celebrated men and the progress they have attained, especially in anatomy and nerve physiology, we can believe that they possessed rather accurate and extensive knowledge of insanity, and that they had taken up and developed in this regard the ideas of the father of medicine.

About a century later, under Ptolemy Evergetus II., the scientific movement passed from Alexandria to Rome, thanks to the discords occurring in the family of the Lagides and the dispersion of learned men that followed it. But it was more especially after the victory of Lucullus and of Pompey in Asia, that this movement became prominent in the Roman Empire.

Græco-Roman Period.

This period of the history of insanity is merely represented by the names of Asclepiades, Celsus, Aretæus, Soranus, Cœlius Aurelianus and Galen. It ended with Alexander of Tralles, Paul of Egina, and the Arabs, who formed a transition between the ancient world and the middle ages.

Asclepiades of Bythinia (80 B. C.), at first a rhetorician, then a physician, an eminent partisan of the philosophical theory of atoms, established formally the line of demarkation of insanity admitted implicitly by Hippocrates, and dating from him, authors divided it into *acute alienation* with fever and phrenitis, and *chronic alienation* without fever, or mania and melancholia. Asclepiades also studied the *apperceptions* (visa), and distinguished them very clearly into hallucinations and illusions.

Finally, the fact of the transformation of one form of insanity into another struck his attention, and it is probably under the influence of this observation that he came to attempt substitutive medication, and especially to advise intoxication in the general treatment of mental alienation.

Celsus (A. D. 5), devoted to insanity only a few pages. In place of the general term *alienatio mentis* employed by Asclepiades, he used the term *insania*, which he applied to the three species comprised in his classification, namely, *frenzy* (acute insanity), melancholia which he attributed to black bile, and lastly, a third form which he divided into two sub-species: 1, *hallucinatory insanity*, gay or sad without delirium (*imaginibus non mente falluntur*); 2, general and partial delirium (*animi desipiunt*).

Celsus went more at length into the subject of therapeutics and formulated some very wise and judicious rules as to hygienic and moral treatment. Unfortunately there is a shadow in the picture, since he advises the use of hunger, chains and chastisements to subjugate the victim of insanity when his acts or his words evidence his want of reason. "*Ubi perperam dixit aut fecit, fame, vinculis, plagis coercendus ist.*"

Aretaeus of Cappadocia (A. D. 80), belonged to the sect of the pneumatists. His greatest title to renown is that he has left behind him very remarkably accurate and truthful descriptions of the various forms of mental alienation, and especially mania and melancholia. He considered melancholia as a mental depression with concentration of thought on one fixed idea, without fever: "*Melancholia in una re aliqua est lapsus, constante in reliquis judicio. Animi angor in una cogitatione di fixus atque inhœrens, absque febre et furore a phantasmate melancolico ortus.*" It was, therefore, according to him, a circumscribed insanity with limited delusions, in which respect it was different from mania, which he considered to be a generalized disorder of the intelligence.

Aretaeus described melancholia at length and very clearly, and noted especially the bodily symptoms, such as constipation, scantiness of urine, eructations, fetor of the breath, smallness of the pulse, etc.

As regards mania, he considered it, as has already been said, as a general continuous insanity, without fever, and he distinguished it from the toxic delirium produced by wine, mandragora and hyoscyamus, by the fact that these latter have a sudden onset and equally sudden disappearance, while mania is stable and permanent. In his description of mania he notes the mental exaltation which in some patients quickens the faculties of memory and imagination so that they converse on astronomy and philosophy and compose poetry apparently beyond their normal ability.

Aretaeus shows in a number of places in his writings that melancholia is a commencement or a species of demi-mania, and that on the other hand when it tends to subside, it sometimes changes into mania rather by its progress than by the intensity of the disease. He also remarked the fact that an attack of mania may be followed by a period of depression.

That part of the work of Aretaeus devoted to the treatment, and especially that of the treatment of maniacal delirium, has not come down to us. We may presume, nevertheless, from what indications we have, that since the time of Celsus a reaction had taken place in favor of the insane, since Aretaeus nowhere mentions restraints or ligatures in his descriptions of even furious cases of frenzy.

Soranus of Ephesus (A. D. 95), whose works have been lost, is only known to us through Cœlius Aurelianus, who appears in his writings as his translator and commentator.

It is impossible to say what, in the admirable work of Cœlius Aurelianus, properly belongs to the author and what must be credited to the commentator. It is probable, nevertheless, that Cœlius Aurelianus has, on a great

number of points, expressed his own personal opinions. Cœlius Aurelianus lived about a century after Soranus, of whom he was, as seems, the translator and commentator.

In a point of view of mental pathology, strictly speaking, Cœlius Aurelianus has added but little to the magnificent descriptions left by Aretæus; his work is limited to perfecting, in a number of points, the ideas of his predecessor. Thus he remarks the distinction between frenzy or febrile delirium and mental alienation properly so-called, and he insists on the organic disorders that accompany melancholia, in regard to which he says: "*In melancholicis stomachus, in furiosis vero caput afficitur.*"

It is especially, however, the chapter relative to the treatment of insanity that forms the most valuable part of the work of Cœlius Aurelianus. It gives an admirable exposition of the rules of the physical and moral treatment of the insane, an eloquent plea for gentle measures and consequently for the suppression of coercive methods; in a word, a full statement of that method which has been revived in our day under the title of *Non-restraint.* Cœlius Aurelianus expresses himself forcibly in regard to those physicians who have recourse to severe methods of treatment. One passage in particular deserves to be quoted: "They seem rather to lose their own reason," says he of these physicians, "than to be disposed to cure their patients, when they liken them to wild beasts who must be tamed by the deprivation of food and the torments of thirst. Misled, doubtless, by the same error, they advise the inhuman use of chains, not considering how their members may be lacerated or broken and how much better it is to control by the hands of men than by the often useless weight of iron. They go so far as to counsel bodily violence and blows, as if to compel the return of reason by such provocations, a deplorable method of treatment that can only aggravate the patients' condition, injure them physically, and offer to them the

miserable remembrance of their sufferings whenever they recover the use of their reason."

In another passage Cœlius Aurelianus says further, after advising that the difficult and disturbed cases be cared for by skilled attendants: "If the sight of other persons irritates them, and only in very rare cases, restraint by tying may be employed, but with the greatest precautions without any unnecessary force, and after carefully protecting all the joints and with special care to use only restraining apparatus of a soft and delicate texture, since means of repression employed without judgment increase and may even give rise to furor instead of repressing it." One could hardly plead better in the cause of humanity or lay down wiser rules on the subject of the means of restraint for the insane.

Galen (A. D. 150) the celebrated physician of Pergamus, who wrote five hundred memoirs and whose ideas had an immense influence on his own times and retained the same during the following fourteen centuries, gave a little attention to the subject of mental alienation. The leading point in his writings in this regard, is the division he made between idiopathic insanity and sympathetic insanity, or insanity by consensus, and the importance he accords to the latter in his descriptions.

After Galen everything fell into obscurity and confusion. Alexander of Tralles (A. D. 560) and Paul of Egina (A. D. 630) brought out nothing new in regard to insanity, and as to the Arab physicians Avecenna, Rhazes (10th century) they confined themselves to developing the ideas of Galen as to insanity by consensus, the seat of which they placed in different viscera, and especially in the liver and spleen.

The Middle Ages.

During the whole duration of the Middle Ages the study of insanity lost itself in the general chaos and no traces of it were to be found. The belief in demons

dominated all imaginations; superstition spread itself in all parts; it was the reign of sorcery, of the witches' Sabbath, of demonopathy, of lycanthropy and of demoniac possession.

Thus occurred in all parts, those terrible epidemics of hysterical religious insanity, the detailed history of which Calmeil has preserved, all of which, after a series of exorcisms, and of more or less solemn mystical ceremonies, ended in the condemnation of the unfortunate insane and their punishment by torture or execution. Thousands of unhappy beings, victims of popular prejudice, atoned with their lives for their loss of reason and became the prey of the flames. Not a single voice was raised in their behalf, the parliaments themselves were the most blood-thirsty in this barbarous slaughter, and we have to come down to the fifteenth century to take up, in the point of view of the history of mental medicine, the chain so long interrupted. Religious delusions were then still firmly rooted, for the first physicians, among them Ambroso Paré himself, despite the timid protests of Nider, gave supernatural interpretations of insanity and attributed it to demoniacal intervention.

The Renaissance.

At the close of the sixteenth century, under the influence of the impulse given by Alciat, Wier, Leloyer, Montaigne, physicians returned little by little to healthier traditions, and Baillon, Nicolas Lepois, Felix Plater, Sennert, Sylvius de le Boë, and Bonet endeavored, not always with success, to loosen the yoke of prejudice that had so tenaciously subjected the foregoing centuries.

Paul Zacchias (1584–1659), proto-physician to the Pope and the States of the church, in his admirable work entitled "Questions Médico-Légales," devoted a very important chapter to various states of mental alienation. We find developed in it, besides exact and concise clinical descriptions, all the medico-legal considerations

suggested by insanity, notably those touching on civil capacity, validity of acts, lucid intervals, and the moral and legal responsibility of the insane.

Sydenham (1624–1689), treated of insanity in only an incidental manner, but he noted one interesting point, that of mania developed in consequence of intermittent fevers.

Willis (1622–1675), whose works are more important and mark a progress beyond those of his predecessors, gives good descriptions of mania and melancholia, which he divides into partial and general; of stupidity, in which he includes, as has been done since, imbecility and idiocy; of dementia and even of stupor.

His descriptions are unfortunately involved with long discussions on the animal spirits. He observed the succession of mania and melancholia, and in this are found the first traces of that which has been described later as circular insanity. Willis also admits, though with certain reservations, the intervention of demons. The rules of treatment he gives are full of good sense; unfortunately, however, he did not hesitate to advise, as frequently needful, rigorous methods: "*Prima indicatio curatoria disciplinam, minas, vincula, æque ac medicinam requirit. Furiosi nonnunquam citius per supplicia et cruciatus, quam pharmacia aut medicamentis curantur.*"

Bonet (1700), in his "Sepulcretum," insists, like Galen and the Arabs, on the importance of visceral lesions in insanity, and reports at length the lesions met with in autopsies in different organs.

At this same period there were made some fortunate experiments in medication, and the cure of a case of relapse of mania by transfusion of blood was reported, also some other cases cured by trephining.

In the eighteenth century the study of mental pathology entered definitely upon a new course. There still occurred some epidemics of religious and hysterical insanity, perhaps among the persecuted Calvinists, perhaps at the tomb of the deacon at Paris, but their morbid nature

was recognized and they were met with treatment medical in its character.

Vieussens (1641-1720), aside from some neuroses the seat of which he fixed definitely in the brain, only attempted to adapt his knowledge of mental diseases to the humoral theories he supported.

Boerhaave (1668–1738) and his commentator Van-Swieten (1700–1772) also subordinated their ideas of insanity to their mechanical theories and attributed everything to the malignity of the blood and the black bile. They give, nevertheless, here and there good descriptions of mania and melancholia, and they point out, particularly in the following, the principal physical characters of melancholia with profound depression, or, in other words, of stupor: "*Pulsus lentior; frigus majus; respiratio lenta; circulatio per sanguinea vasa bona; per lateralia minus bona; hinc humorum secretiorum, et excretiorum minor, tardior, cratior, exitus; minor consumptio, parcior appetitus.*"

Soon, however, under the impulsion of Bonet, Vieussens, and particularly of Morgagni (1682–1771), pathological anatomy made rapid progress and there was more tendency to abandon the humoral and pseudo-chemical theories and to devote more attention to the examination of the solid structures of the body.

Sauvages (1706–1767), a nosologist *par excellence*, made an infinite division of the various forms of nervous disorder. His eighth class, made up of the *vesanias*, or disorders that effect the mind, is itself sub-divided into four orders: 1. *Hallucinations*, vertigo, dimness of vision, diplopia, tinnitus, hypochondria, somnambulism. 2. *Morosities*, depraved desires or affections (pica, bulimia, polydipsia, antipathies, nostalgia, panic terrors, satyriasis, uterine furor, tarentism, hydrophobia). 3. *Delirium* (ecstasy, dementia, melancholia, mania, demonomania). 4. *Abnormal aberrations* (loss of memory, insomnia). Each of these is again split up into more or less numerous subdivisions.

Here and there we find in Sauvages some good descriptions, notably that of anxious melancholia (melancholia attonita). But his merit is in having brought together under the name vesanias and in a complete classification, nearly all that was known in his day of mental diseases.

Lorry (1725–1772) published some good descriptions which were confused, however, by his return to a doctrine half solidist, half humoral.

Cullen (1712-1792), who forms the transition between the Renaissance and the modern epoch, rejected the humoral theory entirely and insisted upon the necessity of anatomo-pathological researches. He classed mental disorders among the neuroses, which form the fourth class of his work. He described *systematized insanity*, remarking at the same time the rarity of finding insanity limited to a single subject, and admitted in his final arrangement only two primary forms of insanity from which he derived all others: mania and melancholia. In the part devoted to treatment he recommends employments, baths, and bodily exercises, and authorizes forcible methods of repression only reservedly.

With Cullen we are already far removed from the ignorance and obscurity of the Middle Ages and mental science had already realized an immense advance. The condition of the insane was, however, still deplorable; they were scattered through the jails, in a few asylums or in miserable cells. Very few were in hospitals, and the so-called hospitals that contained these were in reality only prisons. Their study was therefore as difficult and incomplete as their lot was deplorable.

At Paris, after an act of Parliament dated September 16, 1660, the insane passed first through the Hotel Dieu, where two wards were reserved for them. The ward St. Louis, devoted to men, contained ten beds for four each and two small beds. St. Martin, ward for females, contained six large beds and six small ones. Some places in these wards were reserved for cases of hydro-

phobia, then the treatment employed consisted invariably in douches, cold baths and repeated bleedings, with the internal use of hellebore, purgatives and antispasmodics.

If after several weeks the patient remained uncured, and we can see readily how such a course could do little to restore the reason, they were considered incurable and distributed either to the Petits Maisons, which afterwards became. the hospital of the Ménages, the Salpêtrière, or the Bicêtre.

There ill-nourished, covered with rags, loaded with chains and collars of iron, confined in infected cells intended for criminals, bedded on rotten straw, breathing a mephitic atmosphere, they dragged out a miserable existence, exposed to the view of the public who, being admitted on holidays on the payment of a fee, prepared to view the sight and to tease them like wild animals through the bars of their cages.

It was at this time that Pinel appeared and brought about the memorable reform of 1793, which changed completely the lot of the insane and inaugurated a new era in the history of mental medicine.

SELECTIONS.

CLINICAL NEUROLOGY.

Electrical Diagnosis.—Leszynsky's conclusions, published in the *Journal of Nervous and Mental Diseases*, are:

1. That the value of electricity as an accessory method in diagnosis and prognosis of the diseases of the peripheral nerves is not as universally recognized as its importance demands.

2. That the result of this procedure often furnishes corroborative and conclusive evidence, where only a provisional diagnosis has been made.

3. That the necessary technical skill in successfully pursuing such investigations and correctly interpreting the result, can only be acquired through special study and practice.

4. That the use of the faradic current alone is often sufficient for diagnostic purposes.

5. That, as a rule, the galvanic current is supplemental to the faradic, and, in absence of faradic irritability in nerve and muscle, it is of the greatest importance in prognosis.

6. That the discovery of the reaction of degeneration is not an essential feature in the differential diagnosis as to the location of the lesion.

7. That the peripheral nerve fibers possess an inherent power of regeneration which seems almost unlimited, the length of time required for the completion of the regenerative process varying from a few weeks to seven weeks or more. Therefore in severe forms of injury, the cause, degree and character of damage to the nerve are often of greater importance in prognosis than the demonstration of the reaction of degeneration.

8. That the presence of reaction of degeneration, or partial reaction of degeneration, is not incompatible with the preservation of motility in the same area. This paradoxical condition has been found in cases of lead poisoning and a few others, but thus far the cause has been inexplicable.

9. That the strong currents are only rarely necessary.

the weakest current that will produce a distinctiy perceptible reaction is all that is requisite.

10. That a decrease or disappearance of faradic irritability in nerve and muscle simply denotes an interference with the nutrition in the course of the motor tract between the multipolar cells in the anterior horn and the peripheral nerve distribution. It does not enable us to judge of the nature of the pathological process.

11. That the character of the reaction does not differ, whether the lesion be situated in the cells of the anterior horn, the anterior nerve roots, the nervous trunks, or in their ultimate distribution. The same rule holds good in reference to the various cranial motor nerves and their nuclei, such as facial, hypoglossal and spinal accessory nerves.

12. When the farado-muscular irritability is lost, no reaction can be obtained by a rapidly interrupted galvanic current.

13. The secondary current from an induction coil is the one generally used in testing faradic irritability. Owing to its high electromotive force, the resistance encountered in the moistened skin may be disregarded.

14. The difference in the poles of the faradic current is only a relative one, and cannot be determined by the usual tests as applied to the galvanic current. The electromotive force in the secondary coil is greater at the "break" than at the "make." The electrode that is felt to be the stronger in its action is usually considered as the negative or so-called "faradic cathode."

15. In some apparently healthy individuals the musculo-spiral nerve fails to react to strong currents applied with the "faradic anode," while a comparatively weak current from the "faradic cathode" calls forth a quick response.

16. In a case of undoubted peripheral paralysis the faradic irritability may be preserved, but it almost invariably requires a stronger current to produce muscular contractions than upon the healthy side (quantitative decrease). Dr. Leszynsky said he had never seen a case where this could not be demonstrated within a few days after the onset of the paralysis.

17. The character of the muscular reaction demands attention. A slow and labored contraction, associated with decrease in faradic irritability, denotes degenerative changes.

18. The faradic irritability may return in persistent cases of peripheral paralysis without any perceptible improvement in motility.

19. Electro-diagnosis is inapplicable in paralysis of ocular muscles.

20. When the farado-muscular irritability is lost upon skin excitation, its presence may be demonstrated in the muscle for a longer time by means of acupuncture.

21. If electricity is to be of any service to us in ascertaining whether the nerve trunk has been divided or not, as a result of traumatism, the examination must be made as soon after the injury as possible. We can then determine at once if special surgical interference is necessary. Should two or three weeks elapse before such examination, it will be impossible to state whether the absence of reaction is due to traumatic neuritis or to the complete division of the nerves. Exploratory incision would then be called for.

22. The tests with the galvanic current require adequate apparatus and a working knowledge of the relationship between electromotive force, resistance and current strength. It also requires much time, patience and perseverance. Hence its unpopularity.

Neurasthenia and Melancholia.—Dr. Boissier (*Journal de Médicine de Paris*) has made a study of sixty cases of neurasthenia and melancholia, selecting only such cases as showed the least hereditary taint, and which came nearest to the pure melancholic condition without hypochondria or persecutory delusions, with the view of ascertaining the relations of neurasthenia to depressive insanity. He classified them according to their graduation from the neurosis to the psychosis. With regard to the etiology, melancholia appears to be a stage of aggravation of neurasthenia. An examination of acute cases of melancholia reveals all the physical and psychic symptoms of the two disorders, but in a more intense degree than the ordinary chronic cases. In depressive melancholia all the symptoms of nervous exhaustion may exist and be combined in the same patient. Some, however, are aggravated, others unchanged, others still are modified or diminished by the immobility imposed by the psychosis. As regards the physical characters, the general resemblance of the two conditions is such that it is

difficult to point out the difference with certainty, at least as a general rule. In stuporous melancholia, which, in a measure, is the crystallization of the neurasthenic condition, the patient loses all his energy, scarcely reacts at all to external impressions, and is wrapped up in his automatic sensations and fixed impressions, that form the central point of his insanity. The distress and extreme emotional nature of the neurasthenic are with his general lack of energy, the factors of his timidity and lack of self-confidence. Though this emotivity is less pronounced in melancholia, it exists, but is the less apparent the more depressed the patient. The outward signs, the facial expression, etc., are to some extent lacking. Even in stuporous cases the patient dreads any intercourse with strangers, as indicated by the tremor present. In other cases one can still note by the pulse or the flushing of the brow the cardiac irritation produced by the emotion. In the anxious hyperæsthetic forms, on the other hand, where the depression is not so profound, the emotivity predominates, and the least external manifestations, or internal phenomenon, arouses in the subject the most terrible distress. The writer speaks of the unequal failure of the energies of the various faculties as characteristic of neurasthenia, while he regards the equal general deficiency of the whole, which is subject to variations in intensity, as differentiating melancholia from simple, depressed nervous exhaustion. The one is a paretic, the other a paralytic. Dr. Boissier concludes as follows: "Neurasthenia is a morbid entity, of which the constant symptoms—headache, insomnia, distress, tachycardia, disorders of general sensibility, depression—are in relation with those of melancholia.—*Occidental Medical Times.*

Narcolepsy.—Böhm, in an inaugural dissertation (Berlin, 1893) gives in detail the histories of four cases of this disorder observed in Mendel's clinic. Three were in females—aged, respectively, eleven, twelve and thirty-one years—and one in a young man of eighteen years. In all his patients hysteria was marked, in two of the girls hystero-epilepsy existed, and in one of them there was also exophthalmic goitre.

Narcolepsy was first described by Gélineau as a disorder manifested by an intense desire for sleep, occurring at short intervals. The afflicted patient falls suddenly into a deep sleep, no matter what he may

be doing at the time, and is not awakened by being called, although a light touch rouses him instantly. Hysterical symptoms are certainly very often combined with narcolepsy, even if the latter is not to be considered simply as a manifestation of hysteria. In the three females described by Böhm the narcolepsy was of the above-described character, but the young man's case had a somewhat different course, marked by symptoms of a stronger hysterical nature (once a forty-eight-hour somnolent condition, subsequently a sleep of two weeks' duration, morbid movements of the eyelids and eyeballs, and limitation of the visual field.) He recovered suddenly after an attack of nose-bleed.—*F. Petersen.*

Dr. Hughes has described this disease as he has seen it in the Mississippi Valley, as of malarial origin engrafted upon a neuropathic constitution.

Sudden Blindness in the Course of Diabetes in Young Persons.—At a meeting of the Berlin Society for Internal Medicine, Litten (*Med. Woch.*) reported the case of a girl, seventeen years old, in whom vision had been impaired, and blindness developed in the course of a few hours. The lens of one eye was quite opaque, and light perception was lost in this eye. The lens of the other eye presented considerable striation, with vision cloudy and obscure. The cataracts were successfully extracted, with subsequent improvement in vision. The second case a girl seventeen years old, who suddenly became blind in both eyes. This patient declined operative relief.

On a Newly-noted Symptom in Nocturnal Enuresis of Children.—Frend calls attention to the fact that in about one-half of the number of children suffering from nocturnal enuresis, there is a hypertonicity of the lower extremities without other functional disturbance. The child is completely undressed and placed in a sitting position on a table. Both feet are grasped and an attempt is made to separate the legs as far apart as possible. One encounters a resistance, at first quite pronounced, but gradually diminishing. The resistance is in the adductors. If the extremities are suddenly released they spring together like an elastic band, the heels striking each other with a loud noise. There is also some rigidity in the quadriceps. The same resistance is demonstrable when the

legs are rapidly flexed on the thigh while the child is in a recumbent position. The tendon reflexes are rather pronounced and the musculature is often exceptionally well developed. After presenting various explanations for these phenomena, he concludes that the significance of these symptoms is still to be explained, but they seem, however to favor the assumption of the existence of a special form of nocturnal enuresis.—*The Journal of Nervous and Mental Diseases.*

Maltine with Coca Wine.—A well-known author thus tersely talks of the dual action of "Maltine with Coca Wine:" "The Coca boosts the patient and the maltine furnishes the peg that prevents him from slipping back."

NEUROTHERAPY.

Static Electricity.—According to Dr. Monell (*N. Y. Med. Jour.*) static electricity affords the most certain and permanent relief for lumbago, sciatica, rheumatic and muscular pains. Neuralgias of every kind seem to yield to it more speedily and permanently than to any other form of treatment. In the various types of head pains and in insomnia it is peculiarly efficacious. No other agent equals static electricity in combating hysterical states and associated conditions. It furnishes our best method of treating functional nervous diseases. It is an efficient regulator of deranged bodily functions, and is not surpassed by any other agent in the successful treatment of that important class of ailments known as functional diseases. As a general tonic and as a stimulant to depressed nervous functions, it is of the utmost service, especially in neurasthenia and in old cachexias. As a means of improving the general nervous tone of patients it is without a rival. Reflex irritation, peripheral neuroses, etc., yield, in most cases, to proper applications of this agent. Pruritus of various forms, the itching of eczema, etc., are cases in point. In dietetic diseases it acts with decided benefit; it produces remarkable improvement in disturbed visceral functions, nausea, vertigo, dyspepsia, constipation, colic, etc. In chlorosis and anæmia and all perversions of nutritive processes it lends ready aid to the restoration of the normal functions.—*Medical Standard.*

Trional as a Hypnotic in Asylum Practice.—In the treatment of the protean forms of mental disease encountered in asylums for the insane, trional has proved a safe, reliable and effective hypnotic and sedative, pleasant to take and free from irritating effects on the gastro-intestinal tract. The latest contribution to the therapeutics of the remedy is an article by Dr. Carl Grunfeld, a physician to the Insane Asylum at Budapest (*Pester Med. Chirurg., Presse*, No. 47, 1894), who has carefully compared the action of trional with that of other hypnotics in forty cases. The following is a *résumé* of these experiments:

In simple agrypnia, melancholic depression, conditions of moderate oppressions, as well as in mania not attended with violent hallucinations, a refreshing sleep of six to eight hours' duration is produced often by doses of 1.0 gm., and always by 1.5 gm. The dose need but rarely be increased to 2.0 gm., and if so, especially in paralytics.

The agrypnia which in secondary dementia is usually dependent upon conditions of irritation, or is caused by the varied hallucinations of the insane, can frequently be combated by 1.5 gm. trional, and 2.0 gm. will fail to exert an effect only in special and exceptional cases.

In the more active conditions of excitement of chronic mania, and in paralysis attended with moderate motor restlessness, 2.0 gm. trional usually had a reliable action, the effect being absent or very slight on the first, but satisfactory during the following days.

In paralytics suffering from extreme motor and psychical maniacal excitement a satisfactory effect can only exceptionally be expected from 2.0 gm. trional, while in many cases even 3.0 gm. proved inactive.

As a sedative trional was tested in but one case and gave very satisfactory results. Grunfeld thinks that smaller doses will be required for this purpose, since 1.0 gm. sufficed to produce sleep in a case of chronic mania. A good effect was also obtained from the remedy in fractional doses in a case of obstinate restlessness produced by marked hallucinations. In conclusion, the author remarks that while the introduction of trional in psychiatric practice must be regarded as a gain, this concerns even more the general practitioner, since in the forms of insomnia met with by the latter the remedy proved of positive value.

Treatment of Thomsen's Disease.—Dr. Th. Schott, of Bad Nauheim, writes to the Berlin *Klin. Wochenschrift* (No. 50, 1893): "My observations relate to two cases with pronounced symptoms. They were father and son. The father, forty-two years old, has had symptoms of myotonia cogenita for over twenty years; the son, thirteen years old, had them only for the last two years. In both the lower extremities were most affected. As all sorts of medication, electricity, residence at the seashore and in the mountains, had been tried without result, the patients came to me to try the Nauheim baths, which are ferruginous brine baths with a large quantity of Co2. Beginning with baths weak in brine and Co2, and of indifferent temperature, stronger and warmer baths were used; later, cooler ones, which did not act so well. At the same time, mild resistance, gymnastics and light massage were used. The results were surprising. The walk became better, movements easier, the appearance improved and the spirits became gay. The appetite was increased and they were enabled to take long walks. As the improvement seemed to be due to the combination of the different methods rather than any one of them, and the patients left for home after five weeks' treatment greatly improved, I was in hopes that I had found a method of removing, or at least ameliorating, the troublesome symptoms of this disease. The massage was continued for some weeks at home. When the patients returned the next summer, I was informed that the improvement had lasted until cold weather set in, when the old state of affairs supervened. A second season, with the same line of treatment, was followed by a similar improvement, which, as the family physician informed me later, lasted for some months, but was at last followed by another relapse." This short communication would go to show that massage in combination with gymnastics and warm mineral baths, will produce a temporary improvement in Thomsen's disease, but that a complete cure cannot be obtained by physical means.—*Review of Insanity and Nervous Disease.*

Sulfonal as a Sleep-Producer.—In a discussion which recently took place before the Therapeutical Society of Paris on the comparative value of hypnotics, Dr. Bardet stated that sulfonal produced sleep without anæsthesia and had the advantage over chloral of not disturbing the digestive organs. As a hypnotic in the insomnia of the

insane this remedy has gained a high reputation. In an article on the care and treatment of the insane, Dr. Wilson (*Virginia Medical Monthly*) says: "Sulfonal is a good hypnotic in doses of from ten to twenty grains; indeed, as high as thirty grains is sometimes given, but the maximum doses of these remedies should not be administered at the commencement. Sulfonal has the advantage of not being disagreeable to take, and can be given with the food; it is now largely used." Dr. Clevenger says that in treating the insane, sulfonal has the advantage of solubility in hot tea and coffee and can therefore be given without the patient's knowledge. Recently Dr. Louis Fischer (*Med. Record*, Feb. 17, 1894), has called attention to the value of sulfonal in the treatment of the opium habit in children. He reports twenty-two cases of chronic opium poisoning in children to whom the drug had been administered for some acute disorder, usually of diarrheal character, and its use continued by mother or nurse for purposes of allaying restlessness and irritability. In the sudden or gradual weaning from opium sulfonal proved an admirable remedy for promoting sleep and overcoming restlessness, and as these cases are not infrequent, Dr. Fischer's experience deserves careful consideration.

Neuralgia.—℞ croton chloral, 3 grains (0.2 gramme); cocaine, ¼ grain (0.016 gramme); ext. hyoscyamus pulv., ½ grain (0.03 gramme); caffeine, 1 grain (0.065 gramme); codeine, ¼ grain (0.016 gramme). M. ft. pil. no. 1. Sig.: 1 pill as required.—L. B. Young, in *Medical World*.

Dr. C. W. Chittick reports that he finds pilloids of hæmoferrum (Stearns) the best possible form for the administration of iron, and that it is borne by the most delicate stomachs.

NEUROPATHOLOGY.

The Pathogeny and Treatment of Sciatic Neuritis.—At the recent International Medical Congress, Personali (*Le Mercredi Médical*) expressed the view that a large number of cases of sciatic neuritis represent but a secondary process, depending upon the extension to the

sciatic nerve of an inflammatory process set up by various causes in the connective tissue surrounding the coxo-femoral articulation. Support for this view is found in the pain early referred to the articulation, in the limping gait observed before the sciatic nerve is known to be involved, in the pain induced in parts adjacent to the joint by rotation of the thigh, by the extension of the pain to the entire hip, to the crest of the ilium, and to the external border of the sacrum. The treatment employed and advocated in these cases consists in the employment of the faradic current. One electrode is applied to the lumbar region; the other electrode consists of a brush made of fine, flexible copper wire, which is rapidly passed over the entire affected hip, the sciatic nerve, and the muscles of the calf; then the rapidity is diminished in order to accustom the patient to the pain of the current; and the sitting is concluded by leaving the brush in place for a minute successively upon the painful points upon the hip in the course of the nerve, and in particular over the great sciatic notch, at intervals of twenty or thirty seconds. A strong current is used, as the pain is intense; the sitting is repeated daily, and the entire treatment covers from twenty-five to forty-five sittings. The first result of the treatment consists in an aggravation of the symptoms for about a week; thereafter the pains progressively disappear.

Syphilis of the Spinal Cord.—Prof. Virchow, in *Med. Woch.*, 1893, No. 48, page 577, thinks there is no evidence of any causal relationship between syphilis and tabes, nor is it possible, clinically speaking, to decide the question from the information furnished by the "reminders," seeing that syphilis is practically of universal distribution. Moreover there is nothing in the evolution of tabes that can be compared with what is known as visceral syphilis, which tabes would most likely resemble if it were in any way dependent on such a cause. But tabetic patients present no symptoms of visceral syphilis, nor is any tabetic lesion observable in grave cases of visceral syphilis. He admits that this is no absolute demonstration of the non-existence of the relationship which is said to exist between syphilis and tabes, but the evidence in favor of the latter hypothesis is strong enough to induce him to suspend judgment.

Mode of Death in Cerebral Compression.—Victor Horsley, F. R. S. (*Quarterly Medical Journal*), expresses it as his conviction that cases of cerebral hemorrhage, cerebral tumor, depressed fracture and sudden and violent concussion, especially when applied in the occipital region, die from failure of respiration, and not, as often surmised, from failure of heart.

He states that of all the lower nerve-centers which are necessary to the functions of so-called organic life, the respiratory center is the most sensitive to mechanical pressure and shocks.

In cases where death results from intracranial pressure, artificial respiration should be immediately performed, and the skull opened freely at once; in cases of sudden shock, artificial respiration should be directly instituted, and in every case heat should be applied to the head, preferably by irrigation.

NEUROPHYSIOLOGY.

Influence of Mental Work on the Elements of the Urine.—Dr. H. Thorion, of Paris, has recently published the results of a series of investigations undertaken upon himself for the purpose of determining the influence of mental work alone upon the urine. His conclusions are that intellectual activity increases the quantity of urine, and to a marked extent the amount of lime contained in the urine. There is a slight increase, also, in the amount of chlorine and magnesia. The density of the urine is decidedly decreased, and there is also a slight decrease in the total amount of sulphuric acid. No influence upon other elements of the urine was observed. * * * The results obtained by Dr. Thorion are very meager. * * * They relate wholly to those elements of the urine which the investigations of Bouchard, Rogers and others have shown to be, from a physiological sense, the least inportant.—*Mod. Med. and Bac. Rev.*

NEUROLOGY.

The Unilateral Visual Disturbances of Central Origin and their Relation to Hysteria.—Knies thus gives (*Neurologisches Centralblatt*, No. 17, 1893) the symptoms of this condition: Diminution of visual acuity is present in varying degrees. Complete blindness is

comparatively rare. Pupillary reaction to light in the affected eye is not essentially interfered with in mild cases. It is usually absent in complete blindness, but may be only diminished or it may persist. Concentric contraction of the visual field occurs in all possible degrees, but not in correspondence with the degree of visual disturbance. The latter may be slight with much contraction of the visual field or *vice versa*. The color sense is typically disturbed, corresponding with the color perception of the periphery of the retina and fovea in the normal eye, under feeble illumination for red and green; slightly for yellow and blue. In some there is absolute color blindness. These conditions are due, he thinks, to defective innervation of the cerebral vessels, and shown, if one-sided, by unilateral sensory disturbance and paralysis.

PSYCHIATRY.

Sexual Perversion in the Female.—Dr. J. G. Kiernan states ("Rev. of Nerv. and Ment. Dis.") that while the victim of congenital sexual inversion cannot be regarded as a lunatic, nor as criminally nor civilly irresponsible, still there exists a peculiar psychical state closely akin to that of the hysteric or sexual neurasthenic. It is in just such conditions that suggestion and other phases of psychotherapy have been found of value. There is an undue exaltation of the "ego," together with abulic tendencies. There is a pretty prevalent tendency on the part of these anomalies to regard themselves as "interesting invalids" to whom sympathy is a duty. This notion, rather prevalent at present among them, is decidedly opposed to proper management. He cites the case of a 22-year-old girl who had a neurotic ancestry on the paternal side. Her face and cranium were symmetrical. The patient had always liked to play boys' games and to dress in male attire. She felt herself at certain times sexually attracted by some female friends with whom she indulged in mutual masturbation. These feelings came at regular periods, and were then powerfully excited by the sight of the female genitals. The patient in the interval manifested only repugnance to attention from men. She had been struck with the fact that while her lascivious dreams and thoughts are excited by females, those of females with whom she has conversed are excited

by males. She, therefore, regarded these feelings as morbid. At times she had imperative conceptions, such as that if she turned her head around she would break her neck. To avoid this ideal danger she at times carried her head in a very constrained position. This patient was treated as if afflicted by nymphomania. The usual balneotherapic and other anaphrodisiac measures were employed, and at the same time a course of mental training was instituted. For a long time the patient was enabled to keep the feeling under control, and it was for some years quiescent. The patient later formed a friendship with a woman of like literary and musical tastes. This friendship became a perverted love, and the two were almost inseparable. To secure the companionship of her friend the patient was induced to marry the friend's brother. The union was not congenial to the patient, except that it secured the companionship of her friend. Sexual intercourse excited perverse images in which the husband (who resembled the sister) appeared as another sister. Under these images the patient endured and even enjoyed sexual intercouse, and conceived a languid liking for her husband, who was much attached to her and his sister, and chivalrous in his kindness to them. These relations lasted some years, the esteem and liking of the wife for the husband increasing, but paling before the deep, though perverted, affection for the sister. The sister died from an acute attack of pneumonia, devotedly nursed by both husband and wife. The marriage had been unfruitful, but less than a year after the sister's death a daughter was born who much resembled her. The wife's esteem passed through love of the sister to intense maternal love of the daughter, as resembling the sister; through this to normal love of the husband as the father and brother. The congenital tendency to females is now entirely kept in check by this love. The denouement in this case and the mental phenomena indicate that there is entirely too much sympathy wasted on these patients, since sympathy to them is as poisonous as to the hysteric whose mental state is very similar. Insistence on the morbidity of the pervert ideas and prohibition of sexual literature as in the sexual neurasthenic, together with allied psychical therapy, and anaphrodisiac methods, cannot but benefit. These patients, like the hysteric, will not "will" to be cured while they are subjects of sympathy.

EDITORIAL.

[*All Unsigned Editorials are Written by the Editor.*]

The Czar's Illness and His Physicans.—It is a source of surprise to the neurological mind that so many distinguished men who break down from profound and prolonged strain upon their nervous systems and its sequences should, when ill, summon only a general practitioner or limited area specialist and have the local sequence treated, instead of the whole man, ignoring the best of all physicians, the neurologist, who, of necessity must be a high-grade general practitioner and often something more, in his comprehension of the organism under many of the diseases which affect it. General practitioners are not yet willing to concede it, but there is a time in the history of the break-down of most men of affairs when the broad-minded neurologist, accustomed to taking into constant account the relations of conditions of nerve strains, neuratrophia and exhaustion, could be of inestimable service to our men of great affairs.

But it is generally thought the proper thing, if the disease can be labeled "Morbus Brightii," or some other local trouble consequent upon prolonged central nerve strain, to ignore the neurologist altogether. It was so in the case of General Grant and Jay Gould and many others, and it is so now with the case of the Czar of Russia.

Whatever be the present manifest local result of the great psycho-neural over-strain to which the monarch of all the Russias, whether it is Bright's disease or cancer—no one could serve him, even now, better for counsel than an eminent neuro-clinician and neurotherapist; and there was a time, earlier in his malady when distinguished neurologists and alienists of his dominions, whom we might name, might have been of signal service to him, and perhaps have averted his present hopeless malady.

Neurologists, better than all other physicians, understand the causes of diseases in men who have the strain of State affairs upon them. They should know better than all others how the Czar of all the Russias has

come to be ill, and it is not strange that the final localized outcome of the great brain and nerve-strain to which his Imperial Majesty has succumbed might be Bright's disease or cancer. The latter disease finally attacked the first Emperor Napoleon, as it did our great General Grant, and I believe the last Louis Napoleon. But the neuratrophia of great brain and nerve-strain, wherein trophic centers failed and resistance fell below the normal, preceded the development of the localized disease. Whether the Czar has cancer or Bright's disease, the way back to improved health and a life prolonged is through a restored and tranquillized cerebro-spinal axis. (Two reports of contracted kidney and carcinomia have come to us.) At all events proper adjunctive medical treatment addressed to his over-strained brain and nervous system, such as an experienced neurologist and psychiatrist might suggest would aid materially in the direction of recovery, even though absolute recovery may now be impossible. It is much to be regretted that the general practitioner ignores the neurologist in counsel when his counsel would be most valuable, for neurology is often the keystone of symptomatology and much successful therapeutics in clinical medicine.

The reports of the Czar's disease are conflicting. One report gives his disease as cancer, another as Bright's kidney and a third as poisoning, but all agree that he is a "very ill man."

Fielding Blandford's Recent Address before the Psychological Section of the British Medical Association.—The *London Lancet* editorially refers to the interesting presidential address of Dr. Fielding Blandford before the Psychological Section of the British Medical Association. Blandford's utterances on any subject in psychiatry are always worthy of thoughtful consideration, and we make no apology for introducing the critical reference to the able address of the president of the Section in Psychology, regretting that we have not space for the entire paper:

His address on the "Prevention of Insanity" was characterized by the breadth and thoughtfulness which we expect to find in the utterances of one so experienced and so practical. Its bearings on the public weal are so all-important as to deserve being brought more fully into prominence than could be done in the mere record that we gave of the address in the *Lancet* of the 4th inst. The evolutionary law, whereby, as time

goes on, increasing complexity of the brain is the accompaniment of higher civilization, of the march of education, and of the harder competition and struggle for existence, is the unavoidable means of introducing difficulties of adjustment and liabilities to disturbance in the machinery upon whose working the functions of the brain depend for their uniformity and stability. Recognizing all this, and giving due weight to more recent statistical evidence that insanity is not increasing, Dr. Blandford fears much that insanity is not decreasing, and he is of opinion that neurotic affections generally, including insanity, are on the increase, one single illustration of this being the fact that in 1891 the number of suicides in England and Wales was the highest on record—namely, 2,483. "All these nervous disorders," he goes to say, "taken together with the undoubted and registered insanity with which so many of us are concerned, point to the same fact—that in the evolution of our race the complex brain is becoming more and more unstable, and more prone to be upset by faulty surroundings or circumstances which would not be felt by a more stable organ." Dr. Blandford asks himself the question whether anything can be done to prevent such an increase of neurotic affections, and he bases his reply upon the fact that the preventable character of many maladies, zymotic and otherwise, which were the scourge of our land, has been demonstrated, while at the same time we live amidst more healthy surroundings, with improved hygienic conditions, shortened hours of labor, and increased recreation. This care for life and prevention of disease disturb the ordinary operation of natural selection in preserving the race, because, as Dr. Berry Haycraft says, "if we attempt to do away with its selective influence—namely, the elimination of the weak and the preservation of the strong—we must supply the selective influence by something else, or the race will tend to deteriorate."* And, again, he remarked: "I do not see how we can shirk the fact that preventive medicine and civilization between them have already deteriorated in a marked degree the healthy vigor of our race. If things continue in their present course it is fair to assume that in a hundred years or so the wretched products of our race—embodiments of every constitutional disorder transmitted by ancestry from whose ranks the diseased have not been weeded out before the child-bearing period was over by those natural agencies hitherto free to act—will drag out their lives martyrs to surroundings which they have tried to mould; they who, as a race, should have been moulded by their surroundings." While granting the tendency to deterioration in the sense here referred to, we are not prepared to admit that there are not concomitant correcting influences which would serve to counteract and to retard any such rapid and sweeping process of racial destruction. It so happens that the structural delicacy and all-pervading influence of the brain and nervous system rendered the nerve centers most prone to develop and to perpetuate these deteriorations of

* "Darwinism and Race Progress; Milroy Lectures," 1894.

which insanity, being the saddest and most intense, merits the closest attention on the part of the laity no less than of the medical profession, with a view more especially to its prevention.

Dr. Blandford states that he has long been of opinion that insanity is to be prevented chiefly by limiting the propagation of this most fearful disease through the union of affected persons. Although there are not forthcoming statistics as to who are the persons most likely to cause the disease in their descendants, Dr. Blandford, from his own observation of inherited insanity, is inclined to say the taint is transmitted through the female rather than the male. In the opinion of some authorities it would appear to be very rare that one sex has greater transmissive power than the other. It is a matter of surprise that exact data have never yet been arrived at on this point, for it is one that possesses far fewer complications in its elucidation than some of those investigations undertaken by the modern medical psychologist. Given a parental (with or without ancestral) inheritance of insanity in a person, how, asks Dr. Blandford, are we to prevent him or her from marrying? The first consideration is that the children of an insane parent should marry partners who are themselves free from all nervous disorders and whose inheritance is untainted by any such disease. Legislation on these lines is admittedly unattainable; but it is not beyond hope, as Dr. Blandford points out, that some day a man or woman may be able to dissolve the union which binds him or her for the rest of life to an absolutely hopeless and incurable lunatic. The education of public opinion, always a tedious process under such circumstances, must be relied upon to aid the efforts of the medical profession in opposing the marriage of the unfit. The policy of concealment, mystery and avoidance of inquiry as to family history is a mistaken one and leads to much unpleasantness and misery. Leaving general questions and coming to individual instances, Dr. Blandford thinks, if insanity is to be prevented, that a man or woman who has had an attack of insanity had better remain single, and that a woman who has had a puerperal attack ought, for the sake both of herself and of the community in general, to have no more children: and he gives good reasons for his views, although he does not expect that they will meet with universal approbation.

The next great question is what can be done to prevent the development of insanity in children who come of an insane stock. Here the timely and intelligent advice of the family physician has to be relied upon in securing for such offspring from the earliest time of life proper nourishment and care and a judicious upbringing. Constitutionally timid and nervous children must not be startled and frightened by fearsome tales, but guided onwards as much as possible in an equable groove until they become more matured and stable. The evil and gross habits too often taught children by nurses and other children are fruitful sources of insanity and must be borne in mind both by medical attendants and parents in the education of young folks. In the case of boys and girls with a strong hereditary taint, Dr. Blandford thinks it

very important that they should be brought up to be total abstainers, lest they contract the neurosis of inebriety; and with regard to the question of habitual drunkenness he says that: "Women will not enter inebriate retreats voluntarily; but whenever the Legislature can find time to pass an Act for compulsorily confining habitual drinkers it will be found, if I am not very much mistaken, that the number of females will equal, if it does not surpass, those of the other sex." In his address Dr. Blandford sets forth the views of a matured experience free from fads and brimful of common sense, and we commend its perusal to the ordinary reader as well as to those who are more scientifically disposed.

Advertising Doctors and the Code.—With reference to advertising, the ordinary tricks of trade and deluding devices of quackery through the public press are despicable. Charlatan, with his cart and retinue parading the streets of Paris, was no more undignified than many of the schemes of incompetent professional men to secure public confidence. Nevertheless, it ought not to be unprofessional for the physician to publicly make known his real qualifications, which are superior to all forms of quackery, so that the people may know where and how to find relief from suffering.

Instead of innumerable dispensaries available to the poor only in cities, and taken undue advantage of by the well-to-do at the expense of the bread and butter of the young physician in our ranks, and in lieu of building up into a vast antagonizing host the proprietary medicine men, we should secure to the profession the pecuniary advantages of formula they devise by making it lawful, under the Code, for physicians under proper humane restrictions, to hold and secure proprietary rights in their own prescriptions, or else we should not endorse those who take our prescriptions and copyright them and sell them to the profession and the public.

Suffering people often need medicine when they are out of reach of a physician or without means to employ one.

The profession has been derelict in not providing for this contingency in life and in throwing this obvious moral obligation upon others, by debarring medical men from engaging in the making and placing of proprietary medicine by the Code.

Some common sense regulations should appear in the Code on this subject, defining how far a physician might or might not go in the direction of obeying the dictates

and answering the demands of practical philanthropy, without detriment to that due professional dignity which should characterize our intercourse with the public, but always without the sacrifice of the demands of suffering humanity, for that professional dignity which does not permit duty being discharged to the fullest to the public's health interests must always tell against the medical profession, in the common and finally, unerring judgment of mankind; that judgment which has swept away illiberalism, intolerance, proscription and injustice in other callings of men. In our walk before the world as a body, we should aim to be logical and just, with reason and justice towards ourselves and the people always on our side.

Woman in Medicine.—War belongs to man, diplomacy to woman, while man, whose superior physical strength and physiological advantages have prompted and adapted him to assume the rude combats and severe struggles of life, and while his passions and lack of mental equipoise have kept him in conflict with his brother, woman, embarrassed by her organism and less fitted physiologically for physical fighting, has been obliged to cultivate her wits and to accomplish her preservation and advancement by strategy and *finesse.* Thus, while man by haste and violence has precipitated wars that he has had to fight to an end in all ages, and is continually in the selfish turmoil of business and political contention, woman has cultivated the virtues of patience, submission to the inevitable and the art of scaling obstacles and overcoming barriers in a manner peculiarly her own, which have certainly developed mental subtility and ingenuity in devising expedients for securing success even beyond that of man in many directions. She has kept herself by the side and not beneath man, who has had the physical power to hold her in subjection, and why?

She has won him and lifted him up by heart forces which even the savage could not resist. Though she has obeyed him, yet she has bent him to her purposes and showed him how to live for himself and her. I am not an advocate for woman's suffrage as the best thing for woman, but if she wants to exercise it, I would let her try it. I think woman has more power behind than she will have in front of the political arena; more power behind than upon the throne of man's ambition. She succeeds best when she beacons, persuades and leads man, and

induces him to fight for her, than when she fights for herself. Her persuasive powers are more potent than her coercive. She leads better than she drives, but she gets there all the same.

Doctors' Fees.—

We have on several occasions called the attention of the profession to the difference between the charges of doctors and lawyers. Our readers will find an excellent article on this subject in the June number of the *North American Review*, by Dr. W. A. Hammond. Reference to the subject in medical journals only reaches the profession. The article by Dr. Hammond will undoubtedly be read by all classes, and will probably have its weight with judges and juries in passing upon the fees of lawyers and doctors. Why a lawyer should be paid 500 per cent. more than a doctor for doing 500 times as little work, we suppose is entirely owing to the fact that the lawyer is that much more capable of taking care of his own interests. Exactly why the secular press of this country should take the same view of the case is a mystery. A case in point. The daily papers at the present time are congratulating ex-President Harrison upon receiving a fee of $25,000 for four hours' work in court. Had a medical man of equal or more ability than Mr. Harrison charged a many times millionaire $5,000 for a month's constant attention, the whole press would be charging him with robbery—a man to be avoided when you are sick, etc. Another case in point. Judge Levy, of this city, has just allowed a firm of attorneys a fee of $80,000 for looking after the routine business of an estate for a few months, and yet this very same judge refused to allow a fee of $30,000 which a medical man had presented for many months' attendance on a millionaire and his family. The actual work was probably 100 times more than that performed by the attorney who received $80,000; while the responsibility was probably 500 times more, yet his Honor, Judge Levy, saw fit to cut the doctor's fees down to $10,000. And why?

We transcribe the above from the *Pacific Medical Journal* and fully endorse the same.

The Revue Internationale de Bibliographie, under the editorial management of Prof. Jules Rouvier (of Beyrouth), has been much improved of late. Although it retains its international character, it will be henceforth published under the title of *Revue Internationale de Médcine et de Chirurgie pratiques.*

Doctor L. Tourenaint, of Paris, has been appointed secretary to the Editor. The offices of the *Revue* are removed to Paris, 37 Rue Taitbout.

Medical Men, Attention.—The Mississippi Valley Medical Association will assemble at Hot Springs, Ark., November 20th to 23d, 1894. The widespread enthusiasm awakened in this meeting on account of the selection of Hot Springs as the site has prompted the management of the Iron Mountain Route to make special efforts to promote the comfort of physicians *en route* and return.

There is probably not to-day in all these United States a physician who is not cognizant of the wonderful medical properties contained in the waters of these famous Springs, but there are some who are not aware of the great strides made by the Arkansas Mecca as a pleasure resort in the last few years. Hot Springs to-day is as thoroughly modern as any resort in the country. The old-style structures erected when the place first attracted the attention of the outside world have given way to advanced ideas of architecture, which is especially noticeable in the magnificent hotels of these wonderful springs.

Now is the time of the year when tourists teem from the Atlantic Coast and Lake Regions of the North to the warmer latitudes.

Hot Springs, snugly nestled in the valley of the Ouachita, is fittingly adapted, and implores the sick and well to come to her gates. At the time of the coming Medical Convention at Hot Springs, November 20th, proximo, remember the place will be a scene of gaiety and splendor. Nature will deck the valley with sweet-smelling flowers and tropical plants of various hues, and fashion will reign in society there. The evenings at the principal hotels will be given up to music and the dance. The accommodations offered for the reception of visitors cannot be improved upon, nor can the excellent facilities for treating those who seek relief or permanent cure at this modern shrine of Hygiene.

It is the duty of every physician to familiarize himself with nature's method of treatment, and no better opportunity can be presented than this one.

The physicians of the United States should become personally acquainted with this sanitarium of nature, and no better opportunity will be offered than now for knowing the virtues of Hot Springs, as Nature's therapy especially reveals them to physician, invalid and tourist at this propitious season of the year. Doctor, it will make your heart glad to go there now. It will rest your body. It will enlarge your usefulness to your

patient as a medical counsellor. Every physician should be able to advise concerning health resorts from positive personal and not hearsay knowledge.

Dr. C. B. Burr has resigned the medical superintendency of the Eastern Michigan Asylum for Insane, to take charge of Oak Grove, a private hospital for nervous and mental diseases recently established at Flint, Mich.

Dr. E. A. Christian, formerly assistant superintendent, succeeds Dr. Burr as superintendent of the Pontiac Asylum.

Doctor Oliver Wendell Holmes.—"Eighty-four Years Young," as he wished to be, this distinguished doctor and teacher of medicine, and literary *savant*, poet, philosopher, philanthropist and sage, has passed beyond this life to the immortality of its distinguished gods. He has gone to a deathless fame among the immortals. While he lived among us he was not only the autocrat of the breakfast table but the charm of the amphitheater in the midst of medical students, and of congenial spirits around every table and in every circle in which he sat or moved. His lectures were cheerful and humorous, his writings were always instructive and generally enlivening and optimistic, especially his poetry, which was sweet, pathetic, and when the subject permitted, mirth-provoking. When he wrote the "Autocrat of the Breakfast Table," he passed "under the triumphal arch which every candidate for immortality passes," as he was wont to speak of the inferior strait of the pelvis in its relation to the process of parturition.

Doctor Holmes' life and fame are illustrations of what talent and labor accomplish for physicians in the more and better appreciated field of literature, as compared with the obscure mediocrity of appreciation, which awards the most laborious and learned, who confines himself and exclusively, to the practice of medicine, and yet in the members of no other profession are there more versatile accomplishments or wider anthropological acquisitions.

Men like Dr. Holmes, bring the people to a higher appreciation of the merits of the medically educated.

Holmes was born in the year of Gladstone's and

Lincoln's birth, and while Gladstone survives him of his illustrious co-temporary born, neither Darwin nor Tennyson, nor Edgar Allen Poe, of the great scientists and poets born in 1809, to write "In Memoriam" of him. Holmes was an alumnus of that great school in which he he taught from 1847 to 1882. He had previously to 1847 filled the same chair (anatomy and physiology) in Dartmouth, from 1838 to 1847. The "Autocrat of the Breakfast Table" brought him into literary notice and fame like a flash light in 1857, making both Doctor Holmes and *The Atlantic Monthly* as familiar as "household words." This literary triumph gave him at once a place with Longfellow, Whittier, Ralph Waldo Emerson and Lowell.

Of Dr. Holmes' last book, entitled "Over the Tea Cups," a competent contemporary critic has said: "As an example of charming writing, in which the felicity of Montaigne, the homely wisdom of Franklin and the wit of Sterne are combined, we have nothing exactly like it in our literature."

Until within a few years of his demise Dr. Holmes grew and strengthened in literary merits with his ripening years, and died young at the age of eighty-five years, for the fatigue of a trip from home to Beverly and back to Beacon exhausted him and hastened his death. He died in the midst of his family and friends, "Like one who wraps the drapery of his couch about him and lies down to pleasant dreams."

A genial meeting with Dr. Holmes at Sommerville, in company with Agassiz, John E. Tyler and others abides in our memory from 1878, when we first visited Boston. It made its impress there as an inspiration to better efforts in our lifework.

Mississippi Valley Medical Association.—The Twentieth Annual Meeting will take place at Hot Springs, Ark., on November 20th, 21st, 22d and 23d, 1894. This meeting and this place will be of special interest to *you.*

Criminal Anthropology.—The popular as well as the scientific press of France continues to be stocked with the researches and doctrines of the industrious Turin professor, Lombroso. As an always interesting, usually picturesque, and sometimes meretricious writer, he at present enjoys as great *éclat* in Paris as in Italy. It is in France, indeed, that his many essays and somewhat unique views have won their most active promulgators and espousers. Parisian curiosity and interest in Lombroso are unflagging. The latter responds by assuring France that intellectually she is his preferred and adopted land. A minority of French writers sharply impugn some of his statistics and generalizations, but the time for a sober and critical examination and estimate of his doctrines does not yet appear to have arrived. The French newspapers are especially captivated with Lombroso. His recent study of criminal anthropology, and the strong side-light he has icidentally thrown upon the anarchists, have supplied the themes for many columns of popular reading matter.

In beginning his study of the political criminal, Lombroso differentiates revolution from rebellion. He defines revolution to be a great movement, either successful or attempted, calculated to effect in a government, in society, etc., a radical change for the betterment of a people; whereas rebellion is but a sterile and ineffective resistance to lawful and justifiable authority. He maintains that all true revolutions, whether political, religious, moral or scientific, advance the best interests of humanity. Every initiator or leader in such a revolution, he claims must be either a genius or a saint. In this category he enumerates Paoli, Dandolo, Mazzini, Charlotte Corday, Garibaldi, Marx, Lassalle, etc., and adds thereto the legion of the Christian martyrs.

The art or science of discerning the character of the mind from the features of the face, is the guide whereby Lombroso distinguishes the revolutionist from the criminal. Successful revolutionists, as well as martyrs to great political or religious ideas, usually present an honest expression of eye, a benign cast of countenance, an ample forehead, and if males, a soft and spreading beard. The inferior maxilla may be strongly developed, but it is never hypertrophied, as in most criminals.

Lombroso includes in his class thus favored by facial characteristics the majority of nihilists, who, he writes, are frequently exalted and disinterested beings. Among thirty

notorious nihilists, eighteen possessed regular and even handsome physiognomies, twelve offered minor anomalies of visage, and only two presented the *ensemble* of facial features which the professor terms the "criminal type."

To Lombroso's *type criminal* belong the faces of most regicides and assassins of presidents, notably Fieschi, Guiteau and Nobiling. To this type belong also the promoters and leaders of reigns of terror, such as Carrier, Jourdan and Marat.

After instancing the physiognomies of prominent brigands and communists in illustration of his *type criminal*, Lombroso describes the faces of noted anarchists. He thus depicts the bomb-thrower, Ravachol:

> What first forcibly impresses the beholder of Ravachol's face is its bestiality. Its asymmetry is strongly marked: the nose deviates greatly to the right, the ears are implanted on the head at different heights, and the lower jaw is heavy, square and prognathic.

Doctor Lombroso gives the following psychological history of Ravachol as a counterpart to the above sketch of this anarchist's face:

> The pupil of a primary school until the age of fifteen, Ravachol left it almost absolutely illiterate. Designed by his parents for a simple mechanical trade, he abandoned his apprenticeship because unable or unwilling to acquire even its rudiments. He became a hopeless idler, committed thefts and circulated counterfeit money. He disinterred a corpse and robbed it of its jewels. He murdered an old hermit of eighty-four years, in order to steal his money. At about the same time, he attempted to kill his mother for a fancied offense. It was established during Ravachol's trial that his grandfather, Kœnigstein, and his great-grandfather both perished on the scaffold, convicted of murder and arson.

WARREN WEBSTER.

Exophthalmic Goitre.—A correspondent of the *Med. World* on this subject, in July number, page 18, discloses such a venturesome and injurious empiricism in his treatment of his own daughter, that the dictates of humanity prompt us to protest against such irritating and damaging experimentation. Injections of iodine and similar irritants should never be made into the thyroid body for the cure of Graves' disease. They only irritate an already over-irritated and irritable nervous system. The suggestions of the editor of the *World* for treatment are, on the contrary, sensible and in harmony with what we know of the

pathology of the trouble. Contrary to frequent authoritative treatment, I believe this disease always curable under treatment tranquillizing and reconstructive to the nerve centers, especially such as bring back tone and consequent physiological tranquility to those of the sympathetic, *i. e.*, its ganglia and central nervous system, especially the former. This plan, coupled with proper change of environment and diversion, has effected a cure—not merely improvement—in all but one of the cases which have fallen under my observation and stayed with me under treatment, during the past twenty years.

My treatment includes galvanization and faradization, local static electrization, constitutional and local, a steady course of arsenic, hypophosphites with iron, pepsine, pancreatis, malt, etc., as indicated, and judicious course of bromide of sodium and digitalis, with the thyroid extract as a later and quite satisfactory addition, greatly hastening the cure, whether it be employed as a special thyroid gland reconstructive or more empirically as a general treatment. Its valuable effects administered alone are attested in an article by Dr. Harold, which appears in the present number of the ALIENIST AND NEUROLOGIST.

Exophthalmic goitre is by no means an incurable disease, but its treatment requires neural tranquillization from the start and patient persistence, as in epilepsy, which also is not so incurable with treatment, as has been generally believed by the profession. To rightly manage exophthalmic goitre the patient should be treated all over wherever defects are discovered, and specially with a view to tranquillizing and reconstructing the unstable and weakened sympathetic and general nervous systems, and to the reconstruction of the thyroid body. For the more speedily accomplishing the latter end than heretofore the thyroid extract promises, from recent clinical experience, to be of signal service.

The Unity of the Medical Profession.—Duly thoughtful and observant physicians must realize that it is essential to the greatest good of medicine as a science and art, and of the people who are to receive its benefactions, that there should be the utmost possible unity and harmony on the basis of true science.

If all the earnest, sincere and capable seekers after true knowledge and efficiency in medical science and practice were in the regular profession where they all ought to

be,and the profession as a combined whole sought advancement in matters medical on a common and liberal plane, our profession would conquer the prominence and approbation it merits in public esteem and secure official recognition of its just deserts. Hippocrates recognized the theory of *similia* as a possible explanation of *modus operandi medicinæ*, but he did not construct it into an exclusive system of practice, nor have centuries of observation since his day so dignified it in the minds of the most enlightened of medical scholars.

Regular medicine has long ago absorbed all real truths of homeopathy, either borrowed from Hippocrates or otherwise, just as the best homeopaths, formerly so-called, who, dropping the distinctive title as a misnomer for the true physician, have rejected the vagaries while retaining all the truth of Hahneman's teaching. The place for these men is with regular non-sectarian medicine, which knows no sectarian theories as an *open sesame* to its ranks, and has no *shibboleth* but science and the honest search after and practice of truth, and it is the duty of the great profession of regular medicine to provide a way for the entrance into its ranks as a solid phalanx for progress and truth, of every honest searcher after and votary of truth in medical science.

It is not Hahneman's theory of "*similia similibus curantur morbi*" that stands in the way of his followers becoming regular physicians, but his absurd idea of the spirituality of disease, the spiritual entities of drugs and the notion of the high potentialists that the smaller the dose the greater the effect, and the clinging to the trade mark designation of homeopath by those who do not practice homeopathy but regular medicine the best they know how, that has kept the doors of regular medicine closed to them as trade mark medical sectarians. But homeopathists themselves are growing broader-gauged, with increasing knowledge; some of their journals are medical journals like the *New York Medical Times;* some of their schools are good schools needing only a chair of general therapeutics to place them on a plane for recognition by regular medicine.

The power and influence of medicine over the world depends upon its unity. Here is its strength for humanity and for the general profession's welfare and the greatest good of all of the people. Thoughtful minds in medicine are looking forward to the day when all true physicians will be as a unit in one great fold of influence—only the

cranks, fools and mercenaries without the pale—for the good of the profession, the advancement of science and the welfare of mankind. Precisely how this is to be accomplished is yet a question *sub judice*, but that it will ultimately, is as certain as that the sun will shine on the morrow. Truth may be obscured like the sun, but in time the clouds pass and the day brightens.

Lay Press Traducement of Doctors.—The *New York Medical Record* for Aug. 4th, "strikes back" at "a certain weekly paper" in New York city, which has adopted the practice of publishing some scurrility about the medical profession in each issue. These attacks being composed mainly of stale reproductions of excerpts from the absolute psuedo-wit of a past age, when the profession was made the butt of certain *literati.*

The *Record* reminds this narrow publication of what Voltaire, who often jested the profession, said in its praise:

> Nothing is more estimable than a physician who having studied nature from his youth, knows the properties of the human body, the diseases which assail it, the remedies which will benefit it, exercises his art with caution, and pays equal attention to the rich and the poor.

The secular press is prone to forget the great truth which modern medical science now most forcibly impresses upon all who are familiar with the profession's work, viz.,

> A wise physician, skilled our ills to heal,
> Is more than armies to the public weal.

A New and Distinguishing Sign of Latent Aneurism of the Aorta.—Dr. William C. Glasgow, Professor of Practice of Medicine and Diseases of the Chest and Laryngology, Missouri Medical College, says, in the *New York Medical Journal* for September 15, 1894, as follows:

"The author believes that he has recognized a sign which will corroborate the diagnosis and which will enable us to give a positive opinion in all such cases.

"This sign the author believes is the presence of a systolic sound or thud in the brachial artery, synchronous with the systole of the heart. This sound is sometimes accompanied by an arterial murmur. It may also be

heard in connection with the aneurismal murmur which has been conducted through the artery. When this sound can be heard and aortic regurgitation can be excluded, he claims that a positive diagnosis of aneurism can be made even in the absence of all other signs or symptoms."

A Royal Prize to Luciani and Tizzoni.—Our many readers over the world who have been entertained by the interesting experimental contributions of Professor Luciani will be pleased to learn that this distinguished investigator in neurology and his worthy colleague Dr. Tizzoni have lately been awarded a prize of four thousand dollars for their joint experimental work on the functions of the cerebellum.

Sensitive to Noise.—Thus naively the *Philadelphia Ledger* records the state of aural hyperæsthesia which to the experienced neuro-clinician presages a final catastrophe to the nervous system of a distinguished writer:

M. Octave Feuillet, from all accounts, must have been a hard man to live with. Mme. Feuillet, who ought to know, declares that he was a victim to his nerves. A strange voice, one he was unaccustomed to, in the house, made him wild. When he was ailing, mattresses had to be piled up against his doors, so as to keep out the ordinary noises. When in the country the crowing of cocks, the cackling of hens, the neighing of horses, made him frantic. For a man of poetical temperament the twitter of swallows, the chirping of sparrows, caused him agony. By steady pistol practice, says his wife, he exterminated all the owls in a country garden where he was living.

It will be fortunate for the world of overworked *literati* when the votaries of literature learn the physiological law that nerve irritability is nerve overtax and defective nutrition, neuratrophia and neurasthenia, and that it is both unwise and unsafe not to heed these premonitory symp-

toms of general nervous failure. These are nature's outcries and protests against further strain. They plead for rest and the resources of the neurologist.

Abnormal Conditions of the Generative Organs Associated with Melancholia.—Dr. W. Gill Wylie, of New York, writing on this subject in the *Medical Record* for August 4th, reaches the *rationale* of correct procedure from a neurological stand-point. He concludes his article as follows:

I do not mean that the enlarged condition of the uterus which we call subinvolution, or the other diseased local conditions, will cause melancholia in all, or even in many women, but will do so in some cases, and that the melancholia seems incurable so long as the local disease remains.

This is gynecological as well as neurological common sense. A subinvolution is peculiarly wearing, exhausting and consequently irritating and depressing to the undertoned system of the neuropath, who is prone to melancholia. Such patients fall easily into active neuropathic conditions and especially into psychopathic states, and, contrary to general professional opinion, they often recover rapidly and relapse readily on removal or accession of exciting causes in central or peripheral sources of depression.

In this article Dr. Wylie also says:

Without a single exception all of my cases were in every instance seen in consultation and examined by at least one alienist of good standing, and I am sure that some of the many cases of melancholia treated by opium, rest, etc., could be relieved, if not permanently and radically cured if a gynecologist was called into consultaiton.

Neither alienist nor neurologist can take reasonable exception to this procedure or this proposition. This is a very different thing from the old gynecological attitude of operative procedure as a rule, and as a matter of course, even to the removal of normal uterine adnexa.

The newer gynecology takes just account of the inherent neuropathic factor as the primal causative condition and local disease as the concomitant or exciting cause.

Gynesic surgical procedure in the treatment of psychopathic states, like the surgery of the brain, should be the result of concurrent psychiatric and gyneatric opinion (if we may allowed the coinage of the term).

The fact is, grave and capital operations are nowadays

too often determined on by the skillful surgical hand without the adequately experienced and adjunctive clinical mind. To be able to cut well, in these days of bold and multiplied surgery, is not always tantamount to the best diagnostic or therapeutic judgment. There is sometime more wisdom in good counsel than in skillful execution.

The First Meeting of the Association of Southern Hospitals for the Insane will be held at Birmingham, Ala., on November 20th prox.

The objects of this Association are to study the habits and conditions of society and of individuals that induce insanity; the study of pathological, defective and disturbed conditions of the brain and other organs that constitute the cause or basis of insanity; the discussion of methods for the care and treatment of the insane; the presentation of ways for the best construction, maintenance and management of institutions for the care of the insane; and the dissemination of proper popular information and instruction in reference to the insane in the several States of this section.

Its membership will be composed of representatives of any hospital or asylum for the care of the insane, in the Southern portion of the United States and any physician or other person who has become distinguished, or has exhibited marked interest in lines of work that relate to insanity, either by attainments in neurological or psychological medicine, or by philanthropic work in the interests of the insane, duly elected by the Association.

The Association will be called to order at 8 P. M., on November 20th, in the parlor of the Morris Hotel.

The Executive Committee will arrange a programme and order of business.

A number of excellent papers have been promised. Any delegate who wishes to read a paper will please hand in his subject to the Secretary as early as possible. This being the first meeting of the Association, it has been impossible to arrange for a full programme of subjects to be presented; but it is hoped that any delegate who has a question he would like to discuss or present to the Association, will come prepared to do so.

The headquarters of the Association will be the Morris Hotel, where, unless too large, the meetings will be held.

The Executive Committee are J. T. Searcy, President, Superintedent, Bryce Hospital, Tuscaloosa, Ala.;

Charles D. Hill, Vice-President, Superintendent, Mt. Hope Retreat, Baltimore, Md.; J. W. Babcock, Secretary, Superintendent, Asylum, Columbia, S. C.; T. O. Powell, Superintendent, Asylum, Milledgeville, Ga.; P. L. Murphy, Superintendent, Hospital, Morganton, N. C.

Antikamnia.—The adoption of the monogram on the new tablets and the recall of all the old stock from the market, will prove of benefit to this firm and the many physicians who may hereafter desire to afford relief by its use. It will henceforth be sold only in tablet form.

An Alienist as a Philanthropist.—The late Dr. Pliny Earle, well-known to the rank and file of American psychiatry, left six thousand dollars in his will with which to build a public library for the town of Leicester, Massachusetts.

The Opening Address before the Psychological Section of the Medico-Legal Society, pronounced by Clark Bell, Esq., Vice-Chairman of the Section, will be of especial interest to our readers, coming from a distinguished member of the bar.

The Alvarenga Prize of the College of Physicians of Philadelphia for 1894 has been awarded to Dr. G. E. de Schweinitz, of Philadelphia, for his essay entitled "Toxic Amblyopia."

The Tri-State Medical Society of Illinois, Missouri and Iowa, convened at Jacksonville, Illinois, Tuesday, and Wednesday, October 2d and 3d, 1894.

REVIEWS, BOOK NOTICES, ETC.

A Compend of the Practice of Medicine. By Daniel E. Hughes, M. D., Chief Resident Physician Philadelphia Hospital, etc., etc. Fifth Physicians' Edition, thoroughly revised and enlarged. Including a very complete Section on Skin Diseases and a new Section on Mental Diseases. P. Blakiston, Son & Co., Philadelphia, Publishers.

This is a standard reference book for students which has stood the test of practical trial and won appreciation and endorsement from pupils and teachers. It makes a mistake in classing acute delirious mania as synonymous with typhomania.

The most glaring defect of this book, however, a defect in common with so many other otherwise good books, gotten out by Eastern publishing houses, is the ignoring of writers, in matters of reference, away from the particular locality of the book's birth. The author's loyalty to his own medical college is quite apparent throughout the book, in his quotations and references. The chapter on mental diseases would have had more weight if the author had confined his references and quotations to the views of acknowledged alienists. However, all books have their defects and as those of this book are not uncommonly apparent we can cordially commend it as a fairly safe book of reference for the student and hurried practitioner when on his daily rounds. The author's ill success with opiates in melancholia is a surprise to us.

Syllabus of Lectures on Human Embryology: An Introduction to the Study of Obstetrics and Gynecology. For Medical Students and Practitioners. With a Glossary of Embryological Terms. By Walter Porter Manton, M. D., Professor of Clinical Gynecology and Lecturer on Obstetrics in the Detroit College of Medicine; Fellow of the Royal Microscopical Society, of the British Zoological Society, American Microscopical Society, etc., etc Illustrated with 70 Outline Drawings and Photo-Engravings. 12mo, cloth, 126 pages, interleaved for adding notes and other illustrations, $1.25 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

A valuable book on a subject of interest to all physicians and anthropologists, and especially to young obstetricians and junior gynecologists.

The name of both author and publishers are adequate commendation of the value of the book.

The Insanity of Over-Exertion of the Brain; being the Morrison Lectures, delivered before the Royal College of Physicians of Edinburgh, Session 1894. By J. Batty Tuke, M. D., F. R. C. P. E., F. R. C. S. E. Published by Oliver & Boyd, Edinburgh, and Simpkins, Marshall, Hamilton, Kent & Co., Limited, London.

These lectures have been prepared by an authority in alienism whose

ripe clinical experience in the field of psychiatry justifies him in presenting them to the medical world.

It has not been the author's purpose in these lectures to "work out the dynamics of delusion," but to demonstrate how the normal economy (of the mental) apparatus may be implicated by the action of disease, and to "consider how we may best help to restore healthy relations," and in this aim he has admirably succeeded.

Practical Manual of Mental Medicine. By E. Régis. Translated by H. M. Bannister, with a Preface by Benjamin Ball.

In this book we have an excellent picture briefly portrayed by a master psychiater, of the clinical features of the mental aberrations, and the historical part of the book will prove especially entertaining to the *litterateur* in psychiatry.

Neither Professor Régis, its eminent author, nor Dr. Bannister, its able and accomplished translator, needs introduction to our readers. Both names are guarantees of thoroughness.

This is the first instance of a work treating of mental alienation, written by an alienist, translated by an alienist, and, under the direction of an alienist, printed and bound by the insane. This work has been done at the Utica asylum by Utica asylum patients, under the direction of the distinguished superintendent of this institution, Dr. Alder Blumer. As matter which will especially entertain our readers and display the author's style, we elsewhere present a portion of the historical introduction to this charming book.

The Monist.—The October number contains three very important articles: (1) "Ought the United States Senate to Be Abolished?" by Prof. H. von Holst, of the University of Chicago; (2) "On the Principle of the Conservation of Energy," by Prof. Ernst Mach, of the University of Prague; and (3) "Buddhism and Christianity—a full review of their supposed agreements according to the most recent researches," by Dr. Paul Carus. Maj J. W. Powell, of Washington, also contributes an article to this *Monist*, "On the Nature of Motion." The Open Court Publishing Company, Chicago.

The Johns Hopkins Hospital Report.—Volume IV., Nos. 4 and 5, is the second report of this institution on neurology. Dementia Paralytica in the Negro, heads the list. This is the clinical contribution of the report before. The remaining six subjects are physiological and relate to liver, heart and other viscera, and to the thyroid and pituitary glands in their neurological aspects—their neuro-anatomy and neurophysiology.

Travaux D'Electrotherapie Gynecologique. Archivés Semestrielles D'Elecrothérapie Gynécologique Fondées et Publiées. Par Le Dr. G. Apostoli, Vice-President de la Société Française D'Electrothérapie, Paris, France.

A Bad Lot.—Mrs. Cameron's last work. As a picture of heart-nature, "A Bad Lot," by Mrs. Lovett Cameron, is one of the best of novels. It is so psychically true to nature. It is neither needlessly verbose nor lacking in word-painting. The Lippincott Company are the publishers.

Practical Antiseptics, and Their Use in Daily Practice and for Hygienic Purposes. By Paul Paquin, M. D. This paper highly commends Pasteurine as an antiseptic.

Chairman's Address. Read in the Section on Obstetrics and Diseases of Women, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5-8, 1894. By Joseph Eastman, M. D., LL. D., Indianapolis, Ind.

Closure of the Ear by Growths of Bone; Purulent Inflammation of the Middle Ear; Pain, Deafness, Etc,; Successfully Treated by Osteotomy. By Robert Barclay, A. M., M. D., St. Louis.

On Epilepsy in Early Life, with Especial Reference to the Colony System in the Care and Treatment of Epileptics. By William Philip Spratling, M. D., of New York City.

The Inadequacy of the Morbid Changes Found *Post-Mortem* to Explain the Manifestations of Insanity. By H. A. Tomlinson, M. D., St. Peter, Minn.

Why Chronic Urethritis is Ordinarily Difficult of Cure and an Efficacious Method of Curing it. By Bransford Lewis, M. D., St. Louis, Mo.

Persistent Albuminuria and Glycosuria, with frequent Hyaline Casts, in Functional Nervous Diseases. By Landon Carter Gray, M. D., of New York.

Can Physicians Honorably Accept Commissions from Orthopedic Instrument Makers? By H. Augustus Wilson, A. M., M. D., of Philadelphia, Pa.

The Relation of the Public to the Hospitals for the Insane and their Inmates. By H. A. Tomlinson, M. D., St. Peter, Minn.

Lectures on Rectal and Gastro-Intestinal Surgery, with Demonstrations. By H. O. Walker, M. D., Detroit, Mich.

Some Remarks on Epilepsy, and the Care of Epileptics on the Colony Plan. By Wm. F. Drewry, M. D., Petersburg, Va.

Railway Spine. By Clark Bell, Esq., Vice-Chairman and Secretary of the Section of Railway Surgery, New York City.

Causation and Early Treatment of Mental Disease in Children. By Alfred W. Wilmarth, M. D., Norristown, Pa.

How to Cure the Profound Deafness of Chronic Aural Catarrh. By Robert Barclay, A. M., M. D., St. Louis.

The Genesis of Hallucination, Illusion and Delusion. By H. A. Tomlinson, M. D., St. Peter, Minn.

Remarks on the Medicinal Treatment of Chronic Epilepsy. By E. D. Bondurant, M. D., Tuscaloosa, Ala.

A Report of Two Cases of Brain Tumor, with Autopsies. By Irwin H. Neff, M. D., Kalamazoo, Mich.

A Case of Double Gastrolith Removed by Gastrotomy. By W. B. Outten, M. D., St. Louis, Mo.

A New Dynamometer for Use in Anthropometry. By J. H. Kellogg, M. D., Battle Creek, Mich.

Inebriety as a Disease Analytically Studied. By R. M. Phelps, M. D., Rochester, Minn.

Practical Application of the Principles of Sterilization. By Hunter Robb, M. D., Baltimore.

Bladder Gymnastics and Auto-Irrigation. By Byron H. Daggett, M. D., Buffalo, N. Y.

Abdominal Surgery on the Battle-Field. By N. Senn, M. D., Ph. D., LL. D., Chicago, Ill.

Pasteurine. The Only Non-Poisonous and Palatable True Germicide and Deodorant.

Morphinism in Medical Men. By J. B. Mattison, M. D., Brooklyn, N. Y.

Insanity Among Criminals. By H. E. Allison, M. D., Fishkill-on-Hudson, N. Y.

Notes on Gynecological Technique. By Hunter Robb, M. D., Baltimore, Md.

Treatment of Hydrophobia. By Charles W. Dulles, M. D., Philadelphia.

Some Meteorological Data. By Samuel A. Fisk, A. M., M. D., Denver, Col.

Hydrogen Dioxide. By L. D. Kastenbine, A. M., M. D., Louisville, Ky.

Are There Degrees of Insanity? By R. M. Phelps, M. D., Rochester, Minn.

Report on Hydrophobia. By Charles W. Dulles, M. D., Philadelphia.

Functional Dyspepsia, So-Called. By R. C. M. Page, M. D., New York.

Asepsis in Minor Procedures. By Hunter Robb, M. D., Baltimore.

An Operating Table. By Hunter Robb, M. D., Baltimore, Md.

Woman in Medicine. By Mary A Spink, M. D., Toledo, Ohio.

On the Therapeutic Value of Spermine. By Dr. G. Krieger.

Alienist and neurologist